

THE MARKET VALUE OF VOTING POWER AND DIVIDENDS

By

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This dissertation examines the relative pricing of the low and high-vote shares of 64 firms with two classes of common stock trading in the United States within the period 1984-1988. The firms feature common stock classes with differential voting rights and, in some cases, differential rights to dividends.

I calculate ratios of the market prices of high and low-vote stock to measure the value of the vote and promises of possible preferential dividends to low-vote shareholders. To investigate the source of the value, I examine the relationship between the observed premiums on high-vote shares and firm specific variables.

The standard event study methodology is used to measure abnormal returns around 44 dual-class recapitalization announcements. I test whether post-recapitalization voting premiums and subsequent equity issues are related to cross-sectional differences in abnormal returns.

The voting premiums from my sample are significantly higher than those reported in previous studies of U.S. firms. This result corresponds with the

popularity of hostile takeovers during my sample period. I find the presence of a control threat significantly increases the voting premium. I conclude that the possibility of a takeover premium may induce outside shareholders to pay a premium for high-vote shares even when they have no interest in exercising actual control of the firm.

I also find that preferential dividend promises to low-vote shareholders reduce price differences between classes of common stock. I provide evidence that subsequent issues of low-vote equity may help explain why preferential dividends are promised by insiders and priced by outside shareholders.

Finally, I find that firms which suffer a loss in market value at the recapitalization announcement subsequently exhibit higher voting premiums and are more likely to issue additional low-vote equity. Thus, negative announcement reactions are associated with situations where the value of the vote is high and where the market reacts negatively to equity issues.

CHAPTER 1 INTRODUCTION AND BACKGROUND

Introduction

Common stock ownership generally provides a claim to residual earnings and the right to vote on certain issues. Most shareholders own a relatively small number of shares and have limited incentive to participate in control issues. Thus, the control of many large corporations rests effectively in the hands of officers and directors. Recognition of the problems associated with the separation of ownership and control dates back to Berle and Mean's (1932) observation that opportunities arise for managers to redirect resources from stockholders to themselves when ownership is separated from control of a firm's activities.

In recent years, many publicly traded firms have further separated ownership and control by adopting dual-class common stock. As of 1990, over 150 companies with dual-classes of stock were listed on the national exchanges.¹ In a dual-class recapitalization, a second class of common stock is created with limited voting rights and, in some cases, preferred claim to dividends. One or more low-vote shares are issued for each share held prior to the recapitalization. The pre-existing shares are reclassified as high-vote. The high-vote stock receives multiple votes per share and/or the ability to elect the majority of the board of directors. The newly created, low-vote stock typically

¹ According to Schultz (1990). Many of these firms have only one class of publicly traded stock.

receives one vote per share and/or the ability to elect a minority of the board of directors. In some cases the low-vote stock is nonvoting.

After most dual-class recapitalizations, shareholders have the right to exchange high-vote stock for low-vote stock. To encourage this exchange, the low-vote stock is often awarded preferred dividend status. In many firms, the low-vote shares are promised 110% of the dividend paid to the high-vote shares. In other cases, the low-vote shares are promised "at least" the dividend paid to the high-vote shares.

As a result of the recapitalization, insiders ultimately increase their voting control and decrease their equity investment. Thus, dual-class recapitalizations may harm outside shareholders by insulating management. Alternatively, dual-class recapitalizations may transfer voting rights from outside shareholders to corporate insiders in a mutually beneficial exchange. Outside shareholders receive the promise of preferential dividends while the transactions allow insiders to issue new low-vote equity to finance investment opportunities without jeopardizing their voting control.

Background

Most research on dual-class recapitalizations focuses on one of two issues. First, the difference between the values of high and low-vote shares is used to measure the value of control over a firm's activities. For example, Lease, McConnell, and Mikkelsen (1983) study 30 firms with two classes of common stock trading within the period 1940-1978 and find that the stock class with superior voting rights trades at a premium over the low-vote stock in 26 cases. The average voting premium for all 30 firms was 4.06%. Levy (1982) finds that high-vote shares trade at a 45% average premium in a study of 25

Israeli firms with dual-class common stock. Megginson (1990) studies 152 dual-class British firms over the period 1955-1982 and finds that high-vote shares trade at a 13.3% premium over low-vote shares.

The above studies limit their samples to firms that promise equal cash dividends and capital distributions to both stock classes. However, in order for high-vote shares to trade at a higher price than low-vote shares, finance theory indicates that high-vote shares must carry the expectation of benefits that low-vote shares do not. Thus, evidence that common stock with superior voting rights trades at a higher price than otherwise identical stock implies at least the possibility of differential cash or non-cash payoffs to the two classes. The source of these potential differential payoffs remains an unsettled issue.

The second focus of research on dual-class recapitalizations is on the announcement effects of the intent to recapitalize. Although no immediate change in cash flow results from a recapitalization, the size and distribution of firm value may change as managerial incentives change, and the ability to discipline management is reduced. The most frequent criticism of dual-class stock is that it reduces the likelihood of unsolicited takeovers. Takeovers are an important source of management discipline. With majority control of voting rights, management can block any takeover attempt and deny shareholders the premiums that typically accrue to the target company. If dual-class recapitalizations are perceived as a takeover defense, then share price declines should accompany the announcements of dual-class recapitalizations.² Alternatively, firm value may change if the transaction is perceived to be a mutually beneficial exchange of voting rights, or if the market perceives the

² Jensen and Ruback (1983) report a 1% to 3% average loss from other takeover defenses such as greenmail.

action as a signal of impending changes in the firm's capital structure and dividend policy. A number of studies examine the stock price response to the announcement of plans to create a second class of voting stock. Jog and Riding (1986) find no significant response at the announcement date from 130 firms listed on the Toronto Stock Exchange.³ Partch (1987) examines the stock price reaction of 44 firms traded in the United States during the period 1962-1984. She finds significant positive stock price responses at the announcement date and over intermediate negotiation dates. However, the median stock price response is negative. She concludes that shareholder wealth is not affected by the creation of limited voting stock. Gordon (1986) and Cornett and Vetsuydens (1989) also fail to find a significant stock price effect from a change to two classes of common stock. In the most comprehensive study, Jarrell and Poulsen (1988) investigate 94 firms from the period 1976-1987. They find small, but statistically significant, negative stock price reactions to announcements of the intent to recapitalize into two classes of common stock.

Research Objectives and Results

Since 1978, the ending date in the sample used by Lease et al., there has been a dramatic increase in the number of dual-class recapitalizations in the United States. Previous studies of firms with dual-class common stock establish that voting power has value and that dual-class recapitalizations have varying impacts on firm value. In this dissertation I examine 64 firms with two classes of common stock simultaneously traded on public exchanges in the United States within the period 1984-1988. The sample firms feature common stock classes

³ At the end of 1983, 10% of the aggregate value of the Toronto Stock Exchange was accounted for by shares with restricted voting rights.

with differential voting rights and, in some cases, differential rights to dividends. Specifically, I focus my study on three issues.

Issue 1: The Impact of Preferential Dividend Offers

Most recent dual-class recapitalizations feature differential dividend promises to the low-vote shareholders. Preferential dividends are offered to encourage outside shareholder approval of the transactions and to entice outside shareholders to convert their high-vote shares to low-vote shares. I document two types of preferential dividend promises. One group of firms promise explicit preferential dividends to the low-vote shareholders. In most cases, low-vote shares are promised 110% of the dividend paid to high-vote shareholders. In a limited number of cases, the low-vote shareholders are promised a fixed amount before the two classes share equally in subsequent distributions. A second group of firms promise the low-vote shares at least the same dividend per share as paid to the high-vote shares. This structure allows for the possibility of preferential dividends without guaranteeing them.

The form of these dividend promises is interesting because insiders offer the preferential dividends to low-vote shareholders but tend to concentrate their holdings in the high-vote stock. The preferential offers are structured so that management can refuse to pay cash dividends and effectively nullify the preferential benefits. This dividend policy allows insiders to share equally in the rewards from firm ownership through price appreciation rather than participate disproportionately through dividends.

Given the apparent incentive for managers to avoid paying preferential dividends by eliminating dividends altogether, I examine whether the offers are viewed as credible by the low-vote shareholders. To test whether low-vote

shareholders believe, and therefore price these promises, I classify firms by the form of dividend promise and calculate ratios between the market prices of the high and low-vote stock to measure the value of the vote and any preferential dividends promised and possibly paid to the low-vote shareholders.

If preferential dividend promises are viewed as credible compensation offers, then the average price ratio of firms that offer preferential dividends should be lower than the average price ratio of firms that offer equal dividends. Similarly, if the offer of "at least" equal dividends is perceived as a possible offer of preferential dividends, then the average price ratio of these firms should fall between the average price ratios of firms using the other two offers. Alternatively, if preferential dividend promises are not viewed as credible offers, or if the form of dividend compensation is related to the value of the vote, then the price ratios may not differ significantly across dividend promises.

I find that preferential dividend promises to low-vote shareholders reduce the price ratios between classes of common stock. Firms that offer equal dividends exhibit the highest ratios while firms that offer preferred dividends trade at the lowest ratios. Firms that offered "optional" preferential dividends by promising at least an equal dividend trade at price ratios between the other two forms of dividend promises. Statistically significant differences exist between the average price ratios of firms grouped by the form of dividend promise. Outside shareholders price the dividend promises and therefore must find the promises credible. In fact, almost all the firms that promise preferential dividends to low-vote shareholders pay dividends. Many firms that promise "optional" preferential dividends actually pay preferential dividends.

Insiders who make preferential dividend promises to low-vote shareholders tend to concentrate their holdings in high-vote stock and do not share equally in dividend payoffs. I contend that personal portfolio concerns of

insiders, along with agency problems and the expectation of future equity issues, may explain why preferential dividends are paid.

Personal wealth constraints and/or diversification concerns often prevent managers from increasing their ownership investment. Dual-class recapitalizations allow managers to decrease their ownership stake while maintaining or increasing their voting power. Proposing such a recapitalization signals that insiders may intend to reduce their investment in the firm. The payment of cash dividends is an effective technique to reduce capital investment without reducing voting power. As a result, when outside shareholders believe that managers also desire dividends, the promise of preferential dividends to low-vote shares becomes more credible.

Agency problems and the possibility of future equity issues may also explain why preferential dividends are paid. Dual-class recapitalizations reduce disciplinary forces from inside and outside the company. To alleviate outsiders' concerns about the transaction, recapitalizing firms may find it advantageous to promise alternative devices that will give immunized managers incentives to act as better agents. Easterbrook (1984) suggests such substitutability among disciplining devices. In particular, Easterbrook claims that increased dividends will reduce the supply of internal funds, requiring firms to more frequently utilize the capital market. When firms issue new securities they are subject to extensive external monitoring from investment bankers and auditors. Thus, management entrenchment is a less serious concern if the firm is constantly in

the market for new capital.⁴ In fact, firms that recapitalize are significantly more likely to issue equity.⁵

Although higher dividends may reduce agency problems, outside shareholders must believe that management will pay dividends. I argue that management's intention to issue additional low-vote shares provides additional motivation for outsiders to believe and price the dividend promises. Asquith and Mullins (1986) argue that dividend policy and equity decisions are interrelated. Dividends are credible vehicles to carry managements' assessments of firm value to the investor because they require cash flow that the firm must generate internally or persuade the capital markets to supply. Firms without good future performance find dividend signaling especially costly. If managers intend to issue additional low-vote equity, then they have the incentive to follow through and support the market value of that class of stock.

I investigate whether the promise of preferential dividends to low-vote shareholders is related to firm characteristics. I use LOGIT models to find that subsequent issues of equity are significantly related to the form of dividend promise.

⁴ Rozeff (1982) presents a model for optimal dividend payout ratios where increased dividends reduce agency costs but raise the transactions cost of external financing.

⁵ Partch (1987) finds that 38.6% of recapitalizing firms issued limited voting stock within two years after issuance. By comparison, Mikkelsen and Partch (1986) find only 17% of randomly selected firms issued new common stock over an eleven year period.

Issue 2: Preferential Bids During Hostile Takeovers

Although previous studies establish that voting rights have value, the source of the benefits that support the value remains an elusive issue. The typical explanation is that owners of high-vote stock, who are often also managers, receive benefit from voting control by ensuring a long-run relationship with their firm. The benefits of securing employment range from the non pecuniary, such as power, recognition, and a nice office, to the cash value of a "guaranteed" salary. With either cash or non cash benefits, there seems to be clear incentive for managers to prefer high-vote stock over low-vote stock. Although this is a persuasive explanation of the source of the premiums, it does not directly explain why I find that control premiums are persistent and exist in equilibrium for firms where control is already tightly held.

The market price of common stock reflects the supply and demand of marginal shareholders who are actively trading in the stock. Once a firm has an established group of dominant shareholders, then purchasing high-vote stock will not qualify outsiders for management positions that might allow for the extraction of the benefits. In addition, inside shareholders who have already secured their management position are unlikely to remain active in the market and should not significantly affect the price. As long as a dominant shareholder group exists, outsiders should be unwilling to pay a premium for high-vote stock and insiders should find the high-vote stock overpriced. Thus, the observed premiums may not always directly reflect the value of control related to securing an employment position.

When a dominate shareholder group does not exist and control of the firm is contested, then it is likely that the marginal shareholders will be insiders or potential insiders who may offer a premium price for high-vote stock. When

voting control is held by shares representing a small portion of a company's invested capital, then a bidder can obtain control by offering to purchase only the high-vote shares.⁶ Although most dual-class firms promise both classes equal distributions during liquidation, shareholders may be offered differential compensation in an acquisition.⁷ DeAngelo and DeAngelo (1985) document that 4 out of 30 acquisitions of dual-class firms from 1960-1980 included negotiated premiums to the high-vote shares. The premiums ranged from 83.3% to 200%. Megginson reports that 43 out of 152 British dual-class firms were acquired between 1955-1982. Out of the 43 successful acquisitions, 37 included preferential offers to high-vote shareholders. The premiums ranged from 1.6% to 260%.

The existence of differential takeover premiums suggests an explanation for long-lived control premiums. Outsiders may be willing to pay a premium for high-vote stock, even during periods when control is consolidated, as an option to participate in the profits from possible future control contests. There are cases where tightly held family firms seem immune to takeover threats but subsequently become a target when an important family member dies. Thus, outside shareholders who never intend to directly receive the benefits of control may receive takeover premiums if the firm becomes involved in a control contest.

Of course, the premiums that outsiders pay for an option to participate in future control contests are dependent on their assessment of the value that

⁶ Bergstrom and Rydqvist (1989) develop a model of the optimal bid prices for voting and non-voting shares in corporate acquisitions.

⁷ While some European countries prohibit or restrict two tier and differential bids, U.S. laws do not require that a bid for controlling shares be extended to all shareholders. However, many firms have written fair price provisions into their corporate charters requiring investors who acquire a certain fraction of the votes to extend an offer to all shareholders. See Ryngaert (1988).

insiders, and potential insiders, will place on control, as well as their assessment of the probability and timing of the event. Ultimately, the source of voting value returns to the pecuniary and non pecuniary benefits of employment.

I test whether the possibility of a takeover premium explains why outside shareholders are willing to pay a premium for high-vote stock. Although Megginson (1990) and DeAngelo and DeAngelo (1985) document the existence of takeover premiums paid to high-vote shares, they did not test for the impact of an expected takeover on pre-takeover stock prices across voting classes. I directly test whether the possibility of a takeover affects the voting premium. The voting premiums from my sample are significantly higher than those reported by Lease, McConnell, and Mikkelsen. This result corresponds with the popularity of hostile takeovers during the sample period. I also find the presence of a control threat significantly increases the voting premium. I conclude that the possibility of a larger takeover premium may induce outside shareholders to pay a premium for high-vote shares even when they have no interest in actual control of the firm.

Issue 3: Voting Premiums and the Value of the Firm

Previous studies have independently considered the impact of dual-class stock on firm value and the subsequent relative price differences between classes. Simply put, these studies measure (1) the change in the total value of the firm and (2) how the total value of the firm is split between classes. I investigate whether there is a relationship between the way ownership the firm is divided between classes of stock and changes in the total market value of the firm. Specifically, I test for a relationship between voting premiums measured after the recapitalization and wealth effects measured on the announcement of

the recapitalization. My premise is that the motivation for dual-class recapitalizations may vary greatly from firm to firm. The ambiguous average wealth effects discovered in previous studies support this assertion. At some firms, insiders with voting control may be unwilling to raise new equity capital because of the possibility of losing voting control. If these firms have growth opportunities, then not accessing the growth hurts inside and outside shareholders equally. A dual-class recapitalization may allow these firms to access the growth and should be considered a positive event by the market. When the primary motivation for the recapitalization is to access growth opportunities, as opposed to abusing voting power, I expect to find positive announcement reactions and smaller voting premiums. The most obvious evidence that firms intend to access growth opportunities is an equity issue soon after recapitalization. I expect to find firms that subsequently issue equity exhibiting more favorable announcement reactions.

Other firms may use dual-class recapitalizations simply as insulating devices that may cause a loss in firm value that is borne by low-vote shareholders. Jensen and Meckling (1976) suggest this possibility. They assume that a corporation exists with two groups of shareholders, management that controls the firm, and passive outsiders. Both groups are entitled to equal dividends. According to their model, management will not act in the best interest of outside shareholders and may choose a set of activities for the firm such that the total value of the firm declines. As the manager's fraction of equity falls, his fractional claim on outcomes falls and this encourages him to divert larger portions of the firm's resources toward perquisites. Outsiders anticipate this action by insiders and drive down the stock price and firm value. The insiders maintain or increase their welfare by consuming non pecuniary benefits not

received by outside shareholders. In this case the two classes of shareholders receive equal pecuniary benefits but unequal overall benefits.

Dual-class recapitalizations result in a situation similar to the scenario suggested by Jensen and Meckling. Insiders typically increase their voting control while decreasing their investment.⁸ As a result, dual-class recapitalizations may reduce firm value as the agency costs associated with the separation of ownership and control are magnified.⁹ The reduction in firm value may ultimately be reflected in the low-vote shares that are primarily held by outsiders. Although the firm may have a lower total value, insiders may not be harmed because they use their high-vote shares to improve and secure their employment positions and related salaries. The ratio of the high-vote share price to the low-vote share price measures the value of the vote. I expect to find that firms with negative announcement effects will exhibit larger price ratios.

The standard event study methodology is used to examine stockholder abnormal returns around 44 dual-class recapitalization announcements. I test whether post-recapitalization voting premiums and subsequent equity issues are useful in explaining the size and sign of abnormal returns. As expected, I find that voting premiums are negatively related to recapitalization announcement effects. Firms that suffer larger losses in firm value as a result of the recapitalization announcement, subsequently exhibit larger price differentials between classes. Thus, the greater the value of the vote that is lost by low-vote

⁸ DeAngelo and DeAngelo (1985) find that officers of firms with two classes of common stock averaged 54.8% of the voting power but only 27.6% of the claims to cash flows. Partch (1987) finds that insider ownership and voting power was 48.6% before a dual-class recapitalization. Twenty one months after the event, inside ownership fell to 43.7% while insider voting power rose to 58.6%.

⁹ Jarrell and Poulsen (1988), find a small negative share price reaction to the announcement of the intent to recapitalize.

shareholders, the worse the announcement reaction. Contrary to my expectations, I find that firms that offered equity within one year after the recapitalization suffered significant negative reactions to the recapitalization announcements. This result suggests that recapitalization announcements may contain additional informational relating to pending capital structure changes.

Organization of the Dissertation

The remainder of this dissertation is organized in the following manner. Chapter 2 presents a detailed discussion of dual-class recapitalizations including a review of previous empirical studies. Chapter 3 utilizes average cross-sectional stock price ratios to estimate control premiums and to determine whether preferred dividend promises to low-vote shareholders are priced. Results for individual firms are also presented. Chapter 4 studies the relationship between dividend promises, dividend payments, and future equity issues and suggests an explanation for the pricing of dividend promises given inconsistent management incentives. In addition, I search for the source of voting premiums in equilibrium by measuring the impact of takeover threats on the observed control premiums. Chapter 5 investigates the relationship between wealth effects measured at recapitalization and subsequently observed voting premiums and equity offers. In Chapter 6, I summarize the principal results from the prior chapters.

CHAPTER 2

DUAL-CLASS RECAPITALIZATIONS AND RELATED STUDIES

Introduction

Traditionally, the voting rights and cash flow claims of corporations have been bundled together in the one-share, one-vote tradition. Recently, many publicly traded firms have distanced themselves from this tradition by recapitalizing and creating dual-classes of common stock with differential voting rights. The possible agency problems associated with the resulting separation of ownership and control make the transactions a controversial issue. In this chapter, I first detail the regulatory and legal history of dual-class recapitalizations along with some of the institutional details relating to the transactions. I then summarize and discuss the theoretical cases for and against dual-class recapitalizations including possible changes in the size and distribution of firm value. Finally, I review the previous empirical results relating to this topic.

Regulatory and Legal History

The competing views of the impact of dual-class recapitalizations are a source of disagreement among regulators, managers, and shareholders. Proponents of corporate democracy argue that unbundling voting rights from ownership reduces the ability of shareholders to discipline managers. Defenders of dual-class recapitalizations argue that corporations should be free to select their capital structure as long as changes are approved by the shareholders.

Prior to 1984 the New York Stock Exchange (NYSE) required that firms listed on its exchange maintain a one-share, one-vote rule. As a result, corporations with dual-class common stock were forced to list their stock on other exchanges. The American Stock Exchange (ASE) required only that the ratio of voting rights between the high-vote and low-vote stock not exceed 10 to 1 and the low-vote stock must have certain rights in selecting the board of directors. The National Association of Securities Dealers (NASD) had no restrictions regarding voting rights. In June of 1984, the NYSE imposed a moratorium on its rule prohibiting disparate voting classes. The NYSE issued the moratorium largely because of competitive pressures from the other exchanges.¹⁰ The NYSE moratorium opened the door to a flood of recapitalizations. Firms already listed on the NYSE were free to recapitalize while firms listed on the other major exchanges may have felt that the stigma of the recapitalizations was reduced by the moratorium. Between 1983 and 1987 over 90 firms recapitalized.¹¹ In September 1986, the NYSE formally proposed modification of its standards to allow dual-class trading. Although the NYSE is a self-regulatory agency under Section 19 of the Securities Exchange Act of 1934, the proposed change in its rules required Securities and Exchange Commission (SEC) approval.

Rather than immediately approving the proposal, the SEC attempted to persuade the major exchanges to negotiate a self-imposed regulation against

¹⁰ Although the NYSE cited general competitive pressures, the motivation for the change in policy came when General Motors Corporation announced it would issue a second class of common stock with inferior voting rights to finance an acquisition. The NYSE decided to suspend its rule before it lost its biggest listing customer.

¹¹ From Lehn, Netter, and Poulsen (1990).

dual-class common stock. When the negotiations between the board members of the three major exchanges failed, the SEC responded to growing public criticism of dual-class recapitalizations and proposed a one-share, one-vote rule on the nation's stock markets.¹² In July 1988, SEC rule 19e-4 banned the trading of all dual-class stock created from recapitalizations on all public exchanges and on the National Association of Security Dealers Stock Quotation System (NASDAQ). Dual-class stock was allowed to continue public trading if it existed prior to rule 19e-4. In addition, new issues of low or no-vote common stock were allowed to trade. The SEC's position was that transactions that reduced the voting rights of existing shareholders were harmful and prohibited. Otherwise, corporations were free to select their capital structure including initial public offerings of a second class of common stock with inferior voting rights.¹³

In June 1990, a Federal Appeals Court ruled that the SEC overstepped its authority with its July 1988 rule prohibiting dual-class restructuring. The court decision in *The Business Roundtable vs. Securities and Exchange Commission* was that the SEC had entered corporate governance, an area traditionally determined by state law.¹⁴ The court told the SEC that the rule would allow the establishment of federal corporate law by using access to the capital market as an enforcement mechanism. Corporate law has traditionally been the domain of

¹² Despite the fact that all three of the major exchanges allowed the trading of dual-class stock at the time, the chairmen all argued for the one vote, one share rule. Obviously, they considered the rule favorable, but only when all of the exchanges enacted the rule together. The negotiations broke down when the chairmen of the exchanges were unable to agree on the allowable exceptions to the prohibition.

¹³ As Gilson (1993) states on page 43, "Dual-class capital structures remained viable, but dual-class recapitalizations were prohibited."

¹⁴ The Business Roundtable is a group of 200 major corporations.

the states. If the SEC was allowed to ban corporations from accessing the national exchanges as punishment for violating its rules, then it would effectively be practicing federal corporate law.

The Federal Appeals Court ruling did not prevent the exchanges from voluntarily adopting the principles in rule 19e-4. The NYSE and the NASDAQ both maintained rules similar to 19e-4. The AMEX did not adopt similar rules. In June 1991, the AMEX formally proposed a rule allowing the trading of dual-class shares provided that the transactions are approved by two-thirds of the outstanding shares. Following the AMEX action, the NYSE changed its policy and again allowed dual-class recapitalizations, although under more restrictive conditions. In order for firms to remain listed on the NYSE, dual-class recapitalizations must be approved by a majority of a committee of independent directors, a majority of the full board of directors, and a majority of shareholders who are not directly interested in the transaction. The NASDAQ continues to support its own 19e-4 type rule.

The frequency of dual-class recapitalizations has slowed dramatically since the late 1980s. This change parallels the drop in popularity of hostile takeovers. Without takeover pressure, the insulating value of dual-class stock may be less valuable. In addition, the publicity over possible regulatory actions may cause some firms to avoid the transaction. The comment of Frederick Zuckerman, treasurer of Chrysler Corporation is typical, "I would be reluctant to advise more than one class of common stock. It conveys a message of manipulation even if it is unintended."¹⁵

¹⁵ From Schultz, The Institutional Investor, Fall 1990, "Dual classes, multiple possibilities", page 113.

Mechanics of the Recapitalization

Insiders initiate dual-class recapitalizations by describing the transaction and its potential impact in a proxy statement. The shareholders then vote on the transaction at the annual shareholders' meeting or at a special meeting. The potential transaction is often described as an event that will allow the firm greater flexibility in financing and provide protection from hostile takeovers. Typically, the transaction must be approved by a majority of the shareholders. In some cases, insiders already control the majority of the votes and the vote is a formality. In other cases, approval of the transaction is dependent on insiders persuading outsiders that the change is beneficial.

Firms that recapitalize into two classes of common stock use the dividend method, the exchange method, or the length-of-time method. These methods are discussed in detail below. The dividend method is the most popular and accounts for roughly 50% of all recapitalizations. The exchange method increased in popularity during the 1980s and accounts for about 40% of the transactions. The remaining recapitalizations are length-of-time plans.¹⁶ After recapitalizing using the exchange and the length-of-time method only the low-vote class of stock typically trades publicly. In this study, I require that both classes of common stock trade publicly. As a result, all the firms in my study used the dividend method to recapitalize.

Dividend Method

The dividend method of recapitalization requires a stock split or stock dividend to distribute one or more shares of newly created low-vote stock for

¹⁶ From an analysis of firms in my sample and previous empirical studies.

each share of common stock already held. The previously existing stock is redesignated as high-vote stock. Typically, the low-vote stock is entitled to one vote per share and/or the right to elect a minority of the board of directors. The high-vote stock typically receives 10 votes per share and/or the right to elect the majority of the board.¹⁷ The low-vote stock is often referred to as class A while the high-vote stock is called class B.¹⁸

Immediately following a recapitalization using the dividend method, insiders hold the same ownership and voting percentages as before the recapitalization. Prior to the 1980s, the separation of ownership and control occurred gradually as new low-vote stock was issued to outsiders and as insiders purchased high-vote stock in the open market. In the 1980s, the separation of ownership and control accelerated as most recapitalizing corporations allowed the exchange of high-vote stock for low-vote stock on a share-for-share basis. To encourage outsiders to exchange, the low-vote shares are usually promised a preferential dividend. Insiders do not exchange their low-vote stock but instead increase their relative voting power as outsiders trade voting power for preferential dividend promises.

Exchange Method

The exchange method involves the exchange of newly created high-vote stock for the previously existing stock that is redesigned as low-vote. The low-vote stock is usually promised preferred dividends. The high-vote stock is usually restricted to transfer only to family members and/or insiders. As a result,

¹⁷ In some cases the "low-vote" stock has no voting power.

¹⁸ Although this is the general rule, some firms call the high-vote shares class A and the low-vote shares class B.

it does not trade publicly following the recapitalization. The exchange is usually affected by a self-tender offer open for a limited time.

Length-of-Time Method

A small number of firms change the voting rights of existing stock based on the time that the shares are held. At the recapitalization date all the existing stock becomes long-term and is entitled to superior voting rights. Any share traded after the recapitalization becomes short-term and low-vote with the provision that it becomes long-term if it is held for a previously determined time, typically four years.

Preferential Dividend Promises

Most recent recapitalizations feature preferential dividend promises to the low-vote shareholders. The increase in preferential dividend promises during the 1980s is probably the result of increased criticism of dual-class recapitalizations and the need to accelerate the separation of ownership and control. To encourage shareholder approval and to discourage regulatory scrutiny, insiders offer dividend compensation to low-vote shareholders for their pending loss in voting power. Management may also promise preferential dividends as a way to signal their intent to reduce potential agency costs by paying higher dividends that reduce the firm's free cash flow and force scrutiny by the capital markets. This issue is further discussed in Chapter 4. Preferential dividends play a key role in consolidating voting power for managers after the recapitalization is approved. Most dual-class firms allow their shareholders to exchange high-vote stock for low-vote stock at any time. By offering preferential

dividends to low-vote shares, insiders encourage outside shareholders to convert their high-vote stock.

Two forms of preferential dividend promises are made to low-vote shareholders. In one form, low-vote shares are promised 110% of the dividend paid to high-vote shareholders. In a limited number of cases, the low-vote shareholders are promised a fixed amount before the two classes share equally in subsequent distributions. In the second form, firms promise the low-vote shares at least the same dividend per share as paid to the high-vote shares. The promises imply the possibility of preferential dividends without guaranteeing them. A complete discussion of preferential dividend promises, including sample promises from proxy statements, is presented in Chapter 3.

The Case Against Dual-Class Recapitalizations

Although the impact on firm value and potential agency problems can be debated, empirical evidence reveals that dual-class recapitalizations separate ownership and control. DeAngelo and DeAngelo (1985) find that officers of firms with two classes of common stock averaged 54.8% of the voting power but only 27.6% of the claims to cash flows. Partch (1987) reports that insider ownership and voting power was 48.6% before a dual-class recapitalization. Twenty-one months after the event, inside ownership fell to 43.7% while insider voting power rose to 58.6%.

Opponents of dual-class recapitalizations argue that managers with decreased ownership and increased control are less likely to act in the best interests of outside shareholders. There are two distinct components to this complaint. First, managers with lower ownership shares can consume perquisites at the primary expense of outside owners. For example, when a

manager is also the sole owner, then the cost of buying an expensive painting for his office is borne only by the manager and perhaps the Internal Revenue Service. As the manager's ownership percentage falls, then a greater portion of the cost of the art is "paid for" by outside shareholders. Jensen and Meckling (1976) show that managers with decreased ownership shares have greater incentive to divert corporate resources for their own use at the expense of firm value.

The second component of the complaint is that managers who subsequently misbehave are now better insulated from discipline by outside shareholders. Critics argue that corporate democracy requires that voting rights be proportionate to ownership stake in the firm. Shareholders are often absentee owners of the firm and must rely on management's ability to guide the firm so that owners receive the best possible overall return on their investment. Shareholders use voting power as a check on inefficient managers. Competition for control of a corporation provides a mechanism to replace bad managers and reallocate resources for the benefit of shareholders.

Takeovers are an important source of management discipline. The threat of job loss from a takeover is a powerful incentive to manage a firm in the best interests of all shareholders. The most frequent criticism of dual-class stock is that it reduces the likelihood of unsolicited takeovers. Stulz (1988) argues that increasing managers' voting power decreases the probability of undergoing a change in control. With majority control of voting rights, management can block any takeover attempt and deny shareholders the premiums that typically accrue to the target company. If dual-class recapitalizations are perceived as a takeover defense, then share price declines should accompany the

announcements of dual-class recapitalizations.¹⁹ ²⁰ Interestingly, proxy statements proposing recapitalization often suggest that takeover protection will allow management to protect outside shareholders by deflecting inadequate offers.²¹

Defenders of dual-class recapitalizations argue that the transactions should not harm outside stockholders because they require shareholder approval and because the decision to exchange high-vote stock for low-vote stock is voluntary. The first form of protection, shareholder approval, may not be effective. Empirical evidence suggests that insiders control a significant ownership percentage before recapitalization. In three studies, the average percentage of stock held by insiders was 48.4, 30.0, and 44.5.²² Furthermore, Austen-Smith and O'Brien (1986) show that, even without majority control, management's agenda setting power can force shareholders to choose between several wealth reducing alternatives. For instance, insiders who want to retain control but are unwilling or unable to increase their personal investment in the firm, may refuse to issue new equity to fund attractive new projects.

The value of the second form of protection, voluntary conversion of high-vote stock, is addressed by Ruback (1988). He shows that outside shareholders

19 Jensen and Ruback (1983) find a 1% to 3% average loss from other takeover defenses such as greenmail.

20 In contrast, Blair, Golbe, and Gerard (1989) show that the probability of value enhancing hostile takeovers actually increases when voting rights are free to trade separately from cash flow rights. In the presence of a capital gains tax, some welfare enhancing takeovers will fail and outside shareholders will suffer.

21 DeAngelo and Rice (1983) claim that negotiated offers reduce the free-rider problem and larger gains may be extracted during a takeover.

22 From, respectively, Partch (1987), Gordon (1987), Jarrell and Poulsen (1988).

acting individually are caught in a Prisoner's Dilemma. If a shareholder believes that insiders will not ultimately obtain majority power through the conversion process, then he should exchange his high-vote stock for low-vote stock and receive the "free" dividend bonus. If the shareholder believes that management will ultimately obtain majority power, then he should similarly exchange and at least be compensated for his loss of voting power. Thus, the only condition where the exchange will not take place is when the shareholder considers his vote pivotal. Because outside stockholders perceive a small probability that their vote will be pivotal, they may individually act inconsistently with the collective good.

The Case For Dual-Class Recapitalizations

Proponents of allowing companies to issue dual-classes of common stock cite economic reasons for the transactions and argue that it is important to allow corporations flexibility in their capital structure. Lease, McConnell, and Mikkelsen (1983) report that the vote has value. Thus, it might be beneficial for shareholders who place little value on the vote to "sell" their votes to shareholders who place high value on voting. Many shareholders never vote in the corporate elections and have little interest in the operation of the firm. In contrast, insiders and large shareholders are often keenly aware of voting issues and power structures. As a result, dual-class recapitalizations with preferred dividends promised to low-vote shareholders can be viewed as mechanisms to transfer value in a mutually beneficial manner.

Dual-class recapitalizations may also increase the value of both classes of stock as management's incentive to under-invest is reduced. With only one class of common stock, new equity dilutes voting power unless management

proportionately increases its investment. Eventually, personal wealth constraints and diversification concerns may force managers to bypass positive net present value projects because they are unwilling to issue new equity and jeopardize their control. Debt may not be attractive to management because interest obligations reduce free cash flow and owners may fear creditor involvement and the partial loss of control. In addition, the relative small size of many dual-class firms, along with the high concentration of manager ownership may make debt issues unattractive to the capital market. The solution for these firms is to offer a second class of low-voting common stock that allows management to maintain control and access all positive net present value projects. Firms that recapitalize are significantly more likely to issue equity. Partch (1987) finds that 38.6% of recapitalizing firms issued limited voting stock within two years after issuance. By comparison, Mikkelsen and Partch (1986) find only 17% of randomly selected firms issued new common stock over an eleven year period.

A related argument favoring dual-class shares is based on the assumption that managers are more likely to invest in firm specific human capital when their positions are secure. Moreover, uninsulated managers with private information have incentives to make decisions that favor short-run results at the expense of the outside stockholders' best interests (Narayanan 1985). For example, Stein (1988) shows that takeover pressure may lead managers to focus on short-term profits rather than long-term objectives. Managers who are immunized by dual-class recapitalizations have more freedom to pursue long-run firm value optimization rather than sub-optimal myopic behavior.²³ Alchin and

23 Meulbroek, Mitchell, Mulherin, Netter, and Poulsen (1990) find that firms actually decrease research and development after takeover defenses are enacted. This suggests that dual-class recapitalizations may reduce the incentive to engage in long-term investment.

Demsetz (1972) argue that insiders-managers hold voting rights to deter relatively uninformed outside shareholders from mistakenly replacing the incumbent management team. Freedom from short-run pressures is often mentioned as a motivation for the transaction in the proxy statements proposing dual-class recapitalizations.

Although separating ownership and control appears to provide opportunities for managers to consume firm value, insiders' opportunities to consume perquisites may be dependent on the amount of free cash flow in the firm.²⁴ Managers of firms with very low free cash flow will be hesitant to consume significant firm value if doing so will endanger the going concern of the firm. Gilson (1987) argues that the amount of a firm's free cash flow may drive the decision to enact dual-class recapitalizations rather than leveraged buyouts (LBOs). Gilson speculates that firms that use LBOs are typically mature "cash cows" without a preexisting dominant shareholder group. Mature firms with large amounts of free cash flow benefit from an LBO because agency problems are reduced as managers hold a larger ownership share and as free cash flow is reduced by interest obligations. Empirical studies find the average impact on shareholder wealth at the announcement of a LBO is significantly positive.

Gilson further argues that firms with dual-class stock are typically young with strong growth options and pre-existing dominant shareholders. Young firms generally have lower free cash flow and frequently need to access the capital market for funds. Competitive pressures and monitoring by the capital market may reduce conflicts of interests between management and shareholders. Thus,

²⁴Jensen (1986) defines free cash flow as cash in excess of that required to fund all positive NPV projects. Incentive conflicts exist between managers who want to increase the amount of resources under their control, and outside shareholders who prefer payouts when excess resources exist.

dual-class firms have little to lose by creating apparent agency problems while LBO firms have much to gain from reducing agency problems. Lehn, Netter, and Poulsen (1989) find support for Gilson's argument with evidence of systematic differences in growth rates, agency costs, and capital structure between firms that perform LBOs and dual-class firms.

Dual-class recapitalizations may also have an informational impact on firm value. The creation of dual-class voting stock may reveal information about a firm's prospects. Expectations of higher dividends for the low-vote stock, and the probable issue of new equity, may signal a firm with strong growth and cash flow prospects. Ryngaert (1988) points out that firm value may increase as the adoption of a takeover defense reveals that the firm may be undervalued and a takeover candidate. Alternatively, the expectation of future equity offers may lower stock prices because outsiders believe that management is revealing that its stock is overvalued.²⁵

Previous Empirical Results

The Value of the Vote

Managers may hold stock in their firm for several reasons. One familiar motivation is that holding residual cash flow rights gives managers the proper incentive to maximize firm value. Another motivation is that managers may hold stock for its underlying voting rights. Most corporations have only one class of common stock and it is therefore difficult to assess the relative importance of each motivation. Dual-class stock with disparate voting rights and equal

²⁵ Masulis and Korwar (1986) document a 3% drop in stock prices on the announcement of an equity offer. Also see Myers and Majluf (1984)

dividend rights provides a unique opportunity to measure the value of the vote. Stock price differences between shares that are identical except for voting rights should reflect the value of the vote.

Lease, McConnell, and Mikkelsen (1983) studied 30 firms with two classes of common stock trading within the period 1940-1978. Both classes of their sample firms were simultaneously publicly traded at some point within the sample time. All the sample firms promised equal dividends to both classes. Lease et al. calculate the voting premium by calculating a time series of the ratio of month-end prices of the two classes of common stock for each firm. The numerator is the month-end closing price of the high-vote stock and the denominator is the month-end closing price of the low-vote stock. They find that the stock with superior voting rights trades at an average premium over the low-vote stock in 26 out of 30 firms. A time series of equal-weighted, average cross-sectional month-end ratios is then calculated so that each month of the sample period has an associated average voting premium. The authors report an average monthly voting premium across all months using all 30 firms of 4.06%. Lease et al. use statistical tests to determine if the mean of the time-series of average cross-sectional ratios is different from 1.0.²⁶ They find that the stock prices trade at statistically significantly different prices and conclude that voting has value.

Lease et al. also find that 4 out of the 30 sample firms exhibit the high-vote stock trading at a statistically significant discount to the low-vote stock. Interestingly, these four firms were the only firms in their sample with outstanding voting preferred stock. The voting preferred stock did not control

²⁶ Lease et al. actually use the natural logarithm of monthly ratios for statistical tests because the transformed data more closely resembles a normal distribution. As a result, the statistical test was for a mean of 0.0.

the firm in any of the four cases. While the presence of voting preferred stock might reduce the relative benefit of holding high-vote stock, the authors were unable to discover a plausible explanation for the high-vote stock trading at a lower price than otherwise identical low-vote stock.

Levy (1982) studies 25 firms with two classes of common stock traded on the Israeli stock market in early 1981. The stock classes are identical except that one class has superior voting rights. Levy also measures relative price ratios. He finds that high-vote shares trade at a 45% average premium above low-vote shares. The results of his study are interesting because the premiums are much higher than those found by Lease et al. and because the sample constituted nearly 25% of all the firms listed on the Israeli exchange.

Megglinson (1990) performed a study of 152 dual-class British firms over the period 1955-1982 and finds that high-vote shares trade at a 13.3% average premium over low-vote shares. Unlike the two previous studies, Megginson uses his larger sample size to investigate whether firm specific characteristics influence the voting premium. In addition, Megginson searched for evidence of takeover bids as possible evidence of the source of the premiums. Of the 152 firms in the sample, 43 were targets of takeover bids. In 37 of the 43 cases, the high-vote stock received preferential bids. The average preferential bid was 27.6%. This suggests long-lived voting premiums may reflect the possibility of a larger premium in the event of a takeover.

Megglinson also attempted to control for differences in liquidity and the percentage of insider ownership in explaining the voting premium. He uses the average-age-of-quote methodology to find that the high-vote stock trades significantly less frequently than the low-vote stock. He concludes that liquidity differences between classes will, if anything, reduce the observed high-vote premium. Megginson also finds that the voting premium is positively related to

insider holdings of high-vote shares and negatively related to insider holdings of low-vote shares.

Wealth Effects of Recapitalization Announcements

Given the variety of arguments for and against dual-class recapitalizations, the question of whether shareholders are harmed by the creation of dual-class voting stock is ultimately an empirical issue. A number of studies examine the stock price response to the announcement of plans to create a second class of common stock. Jog and Riding (1986) find no significant response at the announcement date from 130 firms listed on the Toronto Stock Exchange.²⁷ Their sample includes firms that recapitalized into two publicly traded shares during the period 1976-1984. They calculate market adjusted abnormal returns over various prediction intervals centered on the announcement of the intent to recapitalize. Although they find generally negative reactions to the announcements, the results were not statistically significant. Jog and Riding also examine the price changes of both classes after both classes began public trading. They find that a significant portion of firms exhibit declining share prices in conjunction with the actual issuance of low-vote shares. They trace the decline to a decrease in low-vote share prices that precedes an increase in high-vote prices by about one day. They find that high-vote stock ultimately enjoys an average 7% premium over low-vote stock. This part of their study is unique among the wealth studies I document below. If the shareholders of a firm are divided in belief about the benefit of a dual-class recapitalization, then it is not surprising that insignificant average reactions are

²⁷ At the end of 1983, 10% of the aggregate value of the Toronto Stock Exchange was accounted for by shares with restricted voting rights.

measured at the announcement. The relative impact on insiders and outsiders may only be measurable after the stock classes are separated.

Partch (1987) examines the stock price reaction of 44 firms traded in the United States during the period 1962-1984. She calculates abnormal returns over various event windows including the date the board of directors approved the proposal, the date the proxy statements were sent to the shareholders, the date shareholders voted on the proposal, and the dates the *Wall Street Journal* reported on these events. Partch finds the average stock price response to the announcement of plans to recapitalize is positive and statistically significant. However, she also finds that the median stock price reaction is negative so she concludes that shareholder wealth is not affected by the creation of limited voting stock classes. Partch also measures managers' ownership of votes and shares before and after the recapitalization. She finds that officers, directors and their associates controlled 48.6% of the shares before the event. On an average of 21 months later, insiders owned only 43.7% of the shares but controlled 58.6% of the votes.

Two other studies also fail to find an announcement reaction. Gordon (1986) and Cornett and Vetsuydens (1989) do not find a significant abnormal return in response to the announcement of the intent to recapitalize. In the most comprehensive study, Jarrell and Poulsen (1988) investigate 94 firms from the period 1976-1987. Sixty-seven of the 94 firms recapitalized after 1983. Jarrell and Poulsen's sample period captures the increased popularity of the transactions, the increase in hostile takeover activity, the political debate over whether the transaction should be regulated, and the opportunity to compare announcement reactions before and after the NYSE moratorium on the automatic delisting of companies with dual-classes of equity. In contrast to the previous studies, they find significant negative average abnormal price returns at

the announcement of the dual-class recapitalization.²⁸ Jarrell and Poulsen also separately consider the firms that recapitalized before and after the June 1984 NYSE moratorium. They find significant negative average abnormal returns for firms that recapitalized after the moratorium and insignificant average returns in the period before the moratorium. Firms that recapitalized in 1986 and 1987 exhibited the most significant negative average abnormal returns.

Jarrell and Poulsen also investigate whether firm specific variables play a role in determining the wealth effects at announcement. In particular, they investigate the pre-recapitalization percentage of insider holdings, the method of recapitalization, and the exchange where the shares traded. They use average data and regression analysis to measure the possible impact of each variable. Jarrell and Poulsen find that the exchange where the shares are traded was only significant for the NYSE firms that announced intent to recapitalize before the NYSE lifted its ban on dual-class stock. Jarrell and Poulsen measure abnormal returns across each of the three methods of recapitalization, dividend, exchange, and length-of-time. Although the authors hypothesize that the exchange method seems most coercive, they find that the dividend method is the only method to show significant negative average abnormal returns.

Jarrell and Poulsen did not find a linear relationship between insider ownership and abnormal announcement returns. They did find that the middle two quartiles of firms based on the percentage of insider ownership exhibited significant negative average abnormal returns while the top and bottom quartiles

²⁸ Jarrell and Poulsen measure two-day cumulative abnormal returns (CARs) around the event day. The two days are the event day and the preceding day. They find average two-day negative abnormal return of 0.82%. In addition, 62% and 63% of the firms experienced negative abnormal returns on the two days respectively.

show insignificant average reactions. They conclude that the middle two quartiles contain firms where managers are most likely to consolidate control as a result of the recapitalization. In the upper quartile, management may already be insulated, and in the lowest quartile, management may not be able to gain control even after the recapitalization. Their results are consistent with the findings of Morck, Schleifer, and Vishny (1988) regarding the nonlinear relationship between management ownership and market valuation.

Subsequent Performance Studies

Researchers are beginning to investigate post-recapitalization firm performance. Critics of dual-class stock and the resulting separation of ownership and control claim that insulated managers will act inefficiently and not in the best interest of outside shareholders. Defenders of the transactions argue that insulated managers will have the freedom to pursue long-run firm value maximization. Lehn, Netter, and Poulsen (1990) measure operating income divided by sales as a measure of efficiency and report that the percentage increases for dual-class firms exceed those of comparison firms over the first three years following the change. In contrast, Mikkelsen and Partch (1992) report a decrease in operating cash flow following dual-class recapitalizations.

The Contribution of This Dissertation

The previous studies of firms with dual-class common stock find that voting rights have value and the wealth effects stemming from the announcements to recapitalize are ambiguous. Several studies find positive but insignificant reactions while Jarrell and Poulsen (1988), find significant negative wealth declines in the most comprehensive study of the issue.

Lease, McConnell, and Mikkelsen (1983) is widely cited as the first study to document the value of the vote in firms traded in the United States. Since their sample period, a significant number of firms have recapitalized. Most of the recent recapitalizations include preferential dividend promises. In this dissertation, I study the value of the vote and the value of preferential and possibly preferential dividend promises. I use a sample of 64 firms from the period 1984-1988 to capture the growth in popularity of dual-class stock, preferential dividend promises, and hostile takeovers. I group firms by the form of their dividend promise and then calculate ratios of the market prices of high and low-vote stock to measure the value of the vote and the impact of preferential dividend promises to low-vote shareholders.

I examine firm specific variables cross-sectionally to better understand why insiders promise, and often pay, preferential dividends to outside shareholders when the insiders concentrate their holdings in the high-vote shares. I also present an explanation for why these dividend promises are priced by outsiders when insiders have the apparent motive and opportunity to avoid paying dividends. I further investigate whether the threat of a takeover increases the high-vote premium as the market anticipates a possible preferential offer to the high-vote shares. The existence and anticipation of preferential takeover offers may explain why voting premiums are observed for firms that are tightly held.

Finally, the price ratios are used to evaluate whether dual-class recapitalizations cause a loss in firm value that is borne by low-vote shareholders. I investigate whether there is a relationship between the way the firm is divided and the total value of the firm. Specifically, I test whether post-recapitalization voting premiums and subsequent equity issues explain cross-sectional differences in abnormal returns measured at the announcement date.

My premise is that the motivation for dual-class recapitalizations may vary greatly from firm to firm. The ambiguous average wealth effects discovered in previous studies support this assertion. In particular, some firms may recapitalize to provide greater financing flexibility while other firms may recapitalize to insulate management from market disciplinary forces.

CHAPTER 3 ANALYSIS OF AVERAGE PRICE RATIOS

Background and Methodology

This chapter measures the value that the capital market places on control over a firm's activities and the promise of possible preferential dividends. The value of control and preferential dividends is obtained by examining the market prices of both classes of common stock from sample firms. Both classes of stock have identical rights at liquidation and differ only in voting power and possible dividend claims.²⁹

Monthly price ratios are computed for each firm. The numerator is the closing price of the high-vote stock and the denominator is the same day closing price of the low-vote stock. If the two classes of stock are equally valued by the capital market then the average ratio should not be significantly different from 1.0. Market prices were collected from the *Center for Research in Security Prices* (CRSP) tapes. For each year in the sample period, prices for both stock classes were selected from January 15, and then every 21st trading date through December. This procedure yields twelve mid-month price ratios per year for each firm in the sample. If both stock classes of a firm traded throughout the sample period 1984-1988 then 60 price ratios were generated.

²⁹ Although the two classes must be treated equally by the corporation, they do not have to be treated equally by third parties during a takeover.

Sample Selection and Classification

The sample firms must have two classes of common stock simultaneously traded on a public exchange sometime during the period January 1984 to December 1988. This sample period captures the growth in popularity of dual-class recapitalizations, dividend sweeteners, and hostile takeovers. The two classes must feature unequal voting rights and equal cash flow rights at liquidation.³⁰ Unlike previous studies, firms with equal and unequal dividend compensation between classes are included in the sample.

The 64 firms in my sample were obtained by searching the NYSE/AMEX and NASDAQ CRSP tapes for companies with dual listings. Proxy statements and *Standard and Poor's* stock guides were used to remove non-qualifying firms. The sample includes 8 firms from Lease et al.'s study and 56 new firms.

Table 3-1 provides a summary of the sample firms' characteristics. Columns 2 and 3 identify the firm name, the common stock class designation, and the CUSIP number. Column 4 lists the stock exchange where each firm's stock is traded. Three firms are traded on the NYSE, 34 firms are traded on the ASE, and 27 firms are traded on the NASDAQ system. The beginning and ending dual trading dates are provided in Column 5. The voting rights of each class are described in Column 6. Despite the apparent variety of voting arrangements, the recapitalizations systematically create one class of common stock that is likely to control the board of directors. Column 7 of Table 3-1 indicates each firm's dividend arrangement between classes.

³⁰ A few firms offer equal voting rights between the two classes of stock, but feature differential cash flow rights at liquidation. These firms are essentially offering one class of subordinate common stock. They are excluded from the sample.

To investigate the market value of possible dividend compensation for inferior voting rights, the sample firms are initially grouped into three categories based on the form of dividend promise to the low-vote shareholders. The dividend promises were discovered by reading proxy statements and the notes to audited financial statements.

The first category includes 22 firms that promise equal dividends per share to each class of common stock. The following promise by the Brown-Forman Corporation is typical:

Every share of the common stock of both classes, whenever and for whatever consideration issued, shall be entitled to the same rights as every other share of common stock in all distributions of earnings or assets of the corporation distributed to the holders of the common stock.

If preferential dividend promises are viewed as credible compensation offers, then the average price ratio of firms that promise equal dividends should be higher than the average price ratio of firms that promise preferential dividends. Alternatively, if preferential dividend promises are not viewed as credible offers or if the form of dividend compensation is related to the value of the vote, then the price ratios may not differ significantly across dividend promises.

The second category contains 17 firms that promise to pay their low-vote shareholders at least the same dividends per share as paid to the high-vote class. This provision implies the possibility of preferential dividends without guaranteeing them. The following promise by the Alberto Culver Company is typical:

Class A & B are entitled to cash dividends, except that no dividends may be paid in Class B unless an equal or greater dividend is paid on Class A, and dividends may be paid on Class A in excess of dividends paid, or without paying dividends on Class B.

TABLE 3-1
FIRMS WITH BOTH CLASSES OF COMMON STOCK PUBLICLY TRADED
(Both classes simultaneously trading within the period 1984-1988)

#	<u>Company(Class)</u>	<u>CUSIP</u>	<u>Exch.</u>	<u>Dates Listed</u>	<u>Voting</u>	<u>Dividend</u>
1.	Alberto Culver(B) Alberto Culver(A)	01306810 01306820	NSE NSE	650611-881230 860624-881230	1 per share 1/10 per share	A at least B
2.	American Fructose(A) American Fructose(B)	02629620 02629630	ASE ASE	841116-881230 841116-881230	25% of board 75% of board	Equal
3.	American Maize(A) American Maize(B)	02733920 02733930	ASE ASE	700218-881230 700218-881230	25% of board 75% of board	Equal
4.	Associated Comm(A) Associated Comm(B)	04554110 04554120	OTC OTC	810707-881230 830718-881230	1 per share 1/25 per share	Equal
5.	Autodynamics(B) Autodynamics(A)	05277110 05277120	OTC OTC	780427-840618 810603-840618	75% of board 25% of board	A at least B
6.	Baldwin & Lyons(A) Baldwin & Lyons(B)	05775510 05775520	OTC OTC	721214-881230 860509-881230	1 per share none	Equal
7.	Base Ten Systems(B) Base Ten Systems(A)	06977910 06977920	OTC OTC	760914-881230 801209-881230	75% of board 25% of board	A at least B
8.	Beneficial Standard(A) Beneficial Standard(B)	08176110 08176120	ASE ASE	770425-850508 770426-850508	33% of board 67% of board	Equal
9.	Bio Rad Labs(B) Bio Rad Labs(A)	09057210 09057220	ASE ASE	800225-881230 800227-881230	75% of board 25% of board	A at least B
10.	Blount Inc.(B) Blount Inc.(A)	09517320 09517330	ASE ASE	720717-881230 830718-881230	75% of board 25% of board	A preferred
11.	Brown-Forman(A) Brown-Forman(B)	11563710 11563720	ASE ASE	620702-881230 620702-881230	1 per share none	Equal
12.	Canandaigua Wine(B) Canandaigua Wine(A)	13721910 13721920	ASE ASE	830602-881230 860714-881230	75% of board 25% of board	A preferred
13.	Care Corporation(B) Care Corporation(A)	14164510 14164520	ASE ASE	830721-861002 830804-861002	75% of board 25% of board	A preferred
14.	Care Enterprises(B) Care Enterprises(A)	14164910 14164920	ASE ASE	841130-880329 850926-880322	75% of board 25% of board	A preferred
15.	Charter Med.(B) Charter Med.(A)	16124110 16124140	ASE ASE	710614-880831 811211-880831	75% of board 25% of board	A at least B
16.	Crown Central Pet(A) Crown Central Pet(B)	22821910 22821930	ASE ASE	620702-881230 800107-881230	86% of board 14% of board	Equal

TABLE 3-1 (continued)

#	<u>Company(Class)</u>	<u>CUSIP</u>	<u>Exch.</u>	<u>Dates Listed</u>	<u>Voting</u>	<u>Dividend</u>
17.	Dairy Mart(B)	23386010	OTC	830722-881230	75% of board	A at least B
	Dairy Mart(A)	23386020	OTC	851105-881230	25% of board	
18.	Diagnostic Retrieval(A)	25245610	ASE	830811-881230	75% of board	B at least A
	Diagnostic Retrieval(B)	25245620	ASE	830811-881230	25% of board	
19.	Dickenson Mines(A)	25307520	ASE	860708-881230	25% of board	Equal
	Dickenson Mines(B)	25307530	ASE	860708-881230	75% of board	
20.	Equitable of Iowa(B)	29451010	OTC	721214-881230	No vote	Equal
	Equitable of Iowa(A)	29451020	OTC	800428-881230	Vote	
21.	Everest & Jennings(B)	29976710	ASE	801105-881230	75% of board	A preferred
	Everest & Jennings(A)	29976720	ASE	801202-881230	25% of board	
22.	Figgie International(A)	31682850	OTC	860124-881230	1/20 per share	A preferred
	Figgie International(B)	31682860	OTC	830719-881230	1 per share	
23.	First AM B&T PB(A)	31847210	OTC	800923-881230	No vote	Equal
	First AM B&T PB(B)	31847220	OTC	800923-881230	Vote	
24.	First Citizens Bank(A)	31946M10	OTC	861022-881230	1 per share	Equal
	First Citizens Bank(B)	31946M20	OTC	861022-881230	10 per share	
25.	Food Lion(B)	34477510	OTC	721214-881230	Vote	A preferred
	Food Lion(A)	34477520	OTC	830922-881230	No vote	
26.	Forest City Ent.(A)	34555010	ASE	620702-881230	25% of board	A preferred
	Forest City Ent.(B)	34555030	ASE	831110-881230	75% of board	
27.	Hechinger(B)	42266010	OTC	721214-881230	10 per share	A preferred
	Hechinger(A)	42266020	OTC	831101-881230	1 per share	
28.	Homestead Finan(A)	43771420	NYSE	840125-881230	25% of board	A preferred
	Homestead Finan(B)	43771430	NYSE	870115-881230	75% of board	
29.	Hubbell Inc.(A)	44351010	ASE	620702-881230	20 per share	Equal
	Hubbell Inc.(B)	44351020	ASE	620702-881230	1 per share	
30.	Inter Dairy Queen(A)	45937320	OTC	721214-881230	25% of board	A preferred
	Inter Dairy Queen(B)	45937330	OTC	860212-881230	75% of board	
31.	Kelly Services(A)	48815220	OTC	721214-881230	No vote	A preferred
	Kelly Services(B)	48815230	OTC	840802-881230	Vote	
32.	Key Company(B)	49308010	ASE	690715-881230	75% of board	A at least B
	Key Company(A)	49308020	ASE	850924-881230	25% of board	
33.	Liberty Homes(A)	53058220	OTC	850426-881230	No vote	A preferred
	Liberty Homes(B)	53058230	OTC	850426-881230	1 per share	

TABLE 3-1 (continued)

#	<u>Company(Class)</u>	<u>CUSIP</u>	<u>Exch.</u>	<u>Dates Listed</u>	<u>Voting</u>	<u>Dividend</u>
34.	Malrite Comm Malrite Comm(A)	56133810 56133820	OTC OTC	840120-881230 850625-881230	10 per share 1 per share	Equal
35.	McRae Industries(A) McRae Industries(B)	58275720 58275730	ASE ASE	831003-881230 821210-881230	25% of board 75% of board	A at least B
36.	Merchants Capital(A) Merchants Capital(B)	58853010 58853020	OTC OTC	831018-881230 860825-881230	1/10 per share 1 per share	A preferred
37.	Methode Electric(B) Methode Electric(A)	59152010 59152020	OTC OTC	721214-881230 820927-881230	75% of board 25% of board	A at least B
38.	Mobile Comm(B) Mobile Comm(A)	60724310 60724320	OTC OTC	780517-881230 830331-881230	75% of board 25% of board	A preferred
39.	Moog Inc.(A) Moog Inc.(B)	61539420 61539430	ASE ASE	800612-881230 651103-881230	25% of board 75% of board	A at least B
40.	Multnomah Kennel(A) Multnomah Kennel(B)	62574410 62574420	OTC OTC	801224-881230 801224-870921	None 1 per share	Equal
41.	Nielsen A.C.(A) Nielsen A.C.(B)	65409810 65409820	OTC OTC	721214-840829 721214-840829	No vote Vote	Equal
42.	Odetics Inc.(B) Odetics Inc.(A)	67606510 67606520	ASE ASE	840809-881230 841107-881230	75% of board 25% of board	Equal
43.	Oriole Homes(A) Oriole Homes(B)	68626410 68626420	ASE ASE	720705-881230 830404-881230	75% of board 25% of board	B preferred
44.	Pasquale Food(B) Pasquale Food(A)	70266510 70266520	OTC OTC	721214-870105 830823-870105	75% of board 25% of board	A at least B
45.	Plymouth Rubber(A) Plymouth Rubber(B)	73002610 73002620	ASE ASE	660816-881230 660816-881230	Vote No vote	Equal
46.	Presidential Realty(A) Presidential Realty(B)	74100410 74100420	ASE ASE	620702-881230 620702-881230	67% of board 33% of board	Equal
47.	Presidio Oil(B) Presidio Oil(A)	74101610 74101630	ASE ASE	811105-881230 870325-881230	1 per share 1/20 per share	A preferred
48.	Republic Pictures(A) Republic Pictures(B)	76072610 76072620	OTC OTC	850830-881230 850830-881230	1 per share 20 per share	Equal
49.	Resorts International(A) Resorts International(B)	76118510 76118520	ASE ASE	630522-881114 630522-880111	1/100 per share 1 per share	Equal
50.	Restaurant Assoc.(B) Restaurant Assoc.(A)	76125210 76125220	ASE ASE	620702-871120 850903-871120	75% of board 25% of board	A preferred

TABLE 3-1 (continued)

#	<u>Company(Class)</u>	<u>CUSIP</u>	<u>Exch.</u>	<u>Dates Listed</u>	<u>Voting</u>	<u>Dividend</u>
51.	Saunders System(B)	80449810	ASE	721220-860811	75% of board	A at least B
	Saunders System(A)	80449820	ASE	820201-860811	25% of board	
52.	Schwartz Brothers(A)	80852720	OTC	721214-881230	20% of board	A preferred
	Schwartz Brothers(B)	80852730	OTC	880701-881230	80% of board	
53.	Sequa Corp.(A)	81732010	NSE	870112-881230	1 per share	A preferred
	Sequa Corp.(B)	81732020	NSE	870112-881230	10 per share	
54.	Smith A&O(A)	83186510	ASE	620702-881230	75% of board	B at least A
	Smith A&O(B)	83186520	ASE	830930-881230	25% of board	
55.	Tele Comm(A)	87924010	OTC	721214-881230	1 per share	Equal
	Tele Comm(B)	87924020	OTC	790807-881230	10 per share	
56.	Thomaston Mills(B)	88456910	OTC	880616-881230	1 per share	A at least B
	Thomaston Mills(A)	88456920	OTC	880616-881230	None	
57.	Three D Depart(B)	88553910	ASE	690620-881230	75% of board	A preferred
	Three D Depart(A)	88553920	ASE	831223-881230	25% of board	
58.	Turner Broadcasting(A)	90026240	ASE	870901-881230	1 per share	B preferred
	Turner Broadcasting(B)	90026250	ASE	870901-881230	1/5 per share	
59.	United Foods(B)	91036510	ASE	620702-881230	75% of board	A preferred
	United Foods(A)	91036530	ASE	831202-881230	25% of board	
60.	Visual Graphics(B)	92843810	ASE	760802-881230	75% of board	A preferred
	Visual Graphics(A)	92843820	ASE	870224-881230	25% of board	
61.	Wang Labs(C)	93369610	ASE	680910-881230	75% of board	B preferred
	Wang Labs(B)	93369620	ASE	760412-881230	25% of board	
62.	Watsco Inc.(B)	94262210	ASE	680410-881230	75% of board	A at least B
	Watsco Inc.(A)	94262220	ASE	840618-881230	25% of board	
63.	Westmarc Comm.(A)	96057510	OTC	840622-881230	1 per share	Equal
	Westmarc Comm.(B)	96057520	OTC	840625-881230	10 per share	
64.	Wiley John & Sons(A)	96822320	OTC	820914-881230	30% of board	A at least B
	Wiley John & Sons(B)	96822330	OTC	820914-881230	70% of board	

If low-vote shareholders price this promise from insiders, this category should exhibit a smaller average high-vote premium than category 1.

The third category is composed of 25 firms that promise the low-vote class preferential dividends. The low-vote shareholders are promised 110% of the dividends per share paid to the high-vote shareholders or they are promised a fixed amount before the two classes share equally in subsequent distributions.

The following promise by the Care Corporation is representative:

The Class A common stock and Class B common stock will have identical dividend rights with the exceptions that no quarterly cash dividend may be paid on Class B common stock unless a dividend of at least 2.5 cents per share is paid on Class A common stock for the same quarter and that a quarterly cash dividend of up to 2.5 cents per share may be paid on Class A common stock without payment of any quarterly dividend on Class B stock. Quarterly dividends in excess of 2.5 cents per share on Class A common stock must be paid equally on both classes of common stock.

Firms promising preferential dividends are expected to exhibit the smallest voting premium because low-vote shareholders receive compensation for their inferior voting power if dividends are paid. Table 3-2 shows the number of companies included in each category in January of each year.

TABLE 3-2
NUMBER OF FIRMS IN EACH CATEGORY IN JANUARY 1984-1988

Year	Category 1 Firms that promise equal dividends to both classes of shares	Category 2 Firms that promise low- vote shares at least the dividend paid to high- vote shares	Category 3 Firms that promise low- vote shares preferential dividends if dividends are paid	Total # of Firms
1984	14	12	11	37
1985	16	12	12	40
1986	17	14	15	46
1987	19	13	20	52
1988	18	13	22	53

Results for Firms Grouped by Their Dividend Promises

Figures 3-1 and 3-2 plot the time series of the equally weighted, cross-sectional averages of mid-month price ratios for the period 1984-1988. Figure 3-1 shows that firms offering equal dividends generally trade at the highest price ratios. In all 60 months, the cross-sectional average price ratios were above 1.0. The surge in late 1987 is the result of a takeover struggle for Resorts International. As a result of the control contest, Resort's price ratio increased from an average of 1.1 to a high of 7.68.³¹

As expected, firms that promised at least an equal dividend, appear to trade at average price ratios between the average ratios of category 1 and 3 firms. Figure 3-1 also reveals that the average ratios for firms promising preferred dividends were generally closest to 1.0 and occasionally dropped below 1.0. Figure 3-2 displays the price ratios without Resorts International. The price ratios remain generally stratified by the form of their dividend promises.

Table 3-3 displays the statistical results of average mid-month price ratios grouped by categories based on dividend promises. Firms that offer equal dividends to both classes average an 11.3% voting premium, which is much larger than the 4.06% premium reported by Lease, McConnell, and Mikkelson for similar firms from the period 1940-1978.

The average voting premium for firms that offer preferential dividends is 3.2%. Firms that promise "at least" an equal dividend display an average premium of 6.1%. The average premium for all 64 firms in my sample is 6.9%.

³¹ This transaction is discussed in detail in the Appendix.

FIGURE 3-1
CROSS-SECTIONAL PRICE RATIOS (1984-1988)



FIGURE 3-2
CROSS-SECTIONAL PRICE RATIOS (1984-1988)
(Excluding Resorts International)

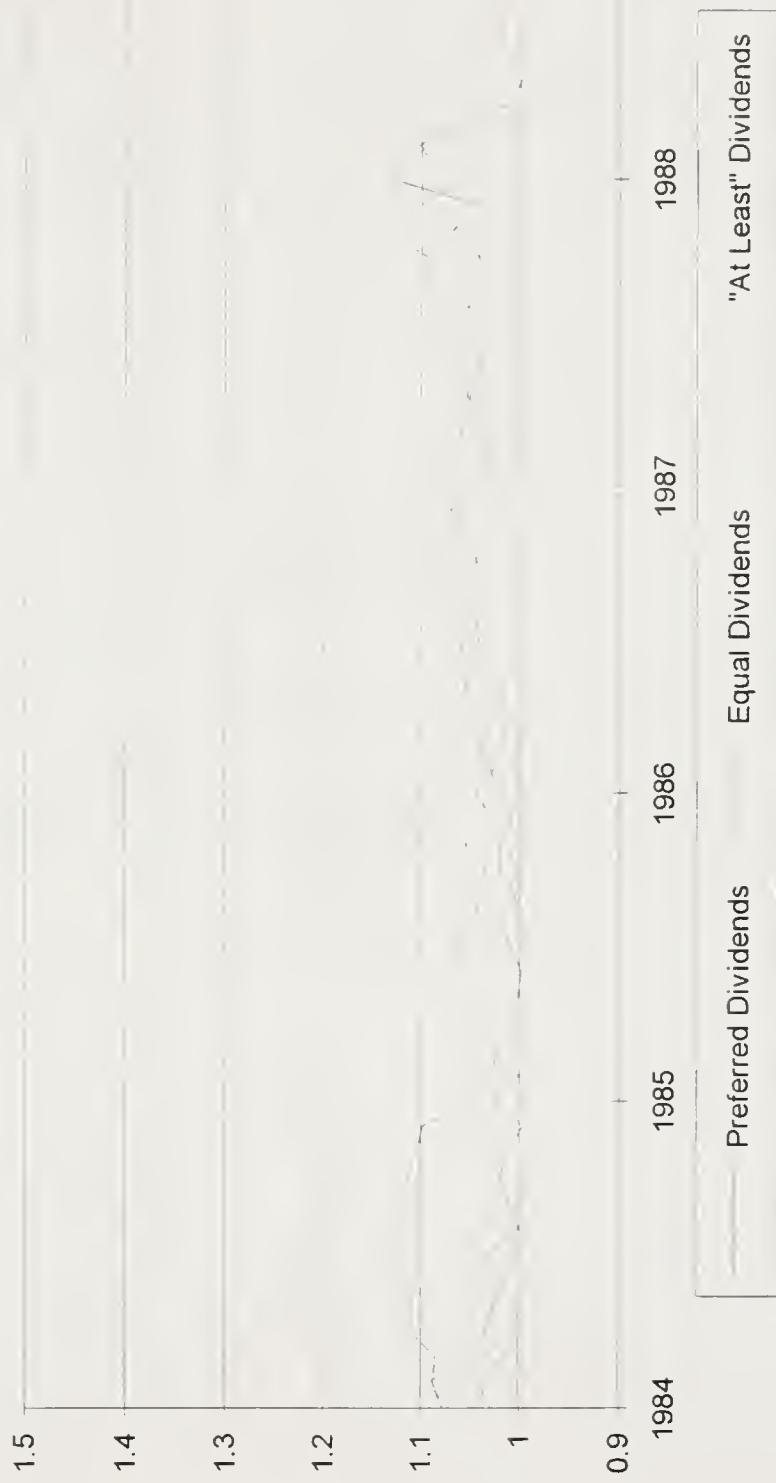


TABLE 3-3
 STATISTICAL RESULTS OF AVERAGE MID-MONTH PRICE RATIOS
 GROUPED BY CATEGORIES BASED ON DIVIDEND COMPENSATION
 (1984-1988)

	Cat1 Firms	Cat1 Firms [*]	Cat2 Firms	Cat3 Firms	All Firms
Number of firms	22	21	17	25	64
Time series mean of average mid-month price ratios	1.113	1.084	1.061	1.032	1.069
Sample standard deviation of average mid-month price ratios	.077	.046	.034	.027	.034
Time series mean of logged, average mid-month price ratios	.105	.080	.059	.032	.066
Sample standard deviation of logged, average mid-month price ratios	.063	.042	.032	.025	.032
Number of monthly observations	60	60	60	60	60
Number of average monthly ratios greater than 1.0	60	60	60	57	60
Number of average monthly ratios less than 1.0	0	0	0	3	0
<i>t</i> -value of null hypothesis test that logged mean equals zero ^a	12.79	15.05	14.43	9.68	16.67
P-value of <i>t</i> -test ^b	.001	.001	.001	.001	.001
P-value of sign test hypothesis that mean equals 1.0	.001	.001	.001	.001	.001

* Category 1 firms with the exception of Resorts International which traded at an extremely high ratio during a takeover in 1987-1988.

a All *t*-tests are conducted using the natural logarithms of the mean monthly ratios.

b P-value is the probability of observing the computed value of the *t*-statistic if the natural log of the true price ratio is zero.

Cat1: Firms that promise equal dividends to both classes.

Cat2: Firms that promise low-vote shareholders at least the dividend paid to high-vote shareholders.

Cat3: Firms that promise low-vote shareholders preferential dividends.

Two hypotheses relating to this data are formally tested in this study. The first null hypothesis is that the two classes of stock for the average company in each category are priced identically.

$$H_0: \frac{\sum_{i=1}^n \ln\left(\frac{P_H}{P_L}\right)}{n} = 0,$$

where: P_H = Market price of high-vote stock observed at mid-month
 P_L = Market price of low-vote stock observed at mid-month

The distribution of price ratios is not normally distributed.³² A logarithmic transformation is used to yield data that more closely resembles a normal distribution. A *t*-test is used to examine whether the mean of the natural logarithms of the average mid-month price ratios is equal to zero.

$$t = \frac{\bar{x} - 0}{s / \sqrt{n}},$$

The *t*-values and related *P*-values from this test are shown in rows 9 and 10 of Table 3-3. For each of the three categories, the null hypothesis is rejected as the mean of the natural logarithm of the average ratios is significantly greater than zero at the .001 level.

Non-parametric analysis supports the *t*-test results without distribution assumptions. For each category, each observation of average mid-month ratios is classified as greater than 1.0, less than 1.0, or equal to 1.0. The sign test is conducted, assuming that observations above and below 1.0 are equally likely to occur. In categories 1 and 2, all 60 observations are greater than 1.0. In category 3, 57 out of 60 average ratios are greater than 1.0. All three categories are significantly different from 1.0 at the .001 level using the sign test.

³² For a test of a mean of 1.0 the data are skewed to the right. When constructing ratios from price pairs the ratio is bound by zero on the left but unbounded on the right. For example, the highest monthly cross-sectional mean price ratio in my study is 7.6850 while the lowest monthly cross-sectional mean price ratio is .4545.

The second null hypothesis tested in this study is that the means of the natural logarithms of the average cross-sectional ratios are not significantly different between classes.

$$H_0: \ln\left(\frac{P_{H1}}{P_{L1}}\right) = \ln\left(\frac{P_{H2}}{P_{L2}}\right) = \ln\left(\frac{P_{H3}}{P_{L3}}\right),$$

where:

$\frac{P_{H1}}{P_{L1}}$ = The average price ratio for firms promising equal dividends

$\frac{P_{H2}}{P_{L2}}$ = The average price ratio for firms promising "at least" equal dividends

$\frac{P_{H3}}{P_{L3}}$ = The average price ratio for firms promising preferential dividends

Using the *t*-test for the difference between two means,

$$t = \frac{\bar{X}_b - \bar{X}_a}{\sqrt{\left(\frac{\sigma_b^2}{n_b} + \frac{\sigma_a^2}{n_a}\right)}},$$

the null hypothesis is rejected for each combination of classes with a P-value of .001. On average, category 1 stock classes trade at a higher ratio than category 2 stock classes. Similarly, category 2 stock classes trade at a higher ratio than category 3 stock classes. These results, including *t*-statistics, are displayed in Table 3-4.

TABLE 3-4
TESTS FOR STATISTICAL DIFFERENCES BETWEEN MEAN LOGGED
PRICE RATIOS GROUPED BY CATEGORIES BASED ON PROMISED
DIVIDEND COMPENSATION (1984-1988)

	<i>t</i> -value ^a	P-value ^b
Category 1 (mean = .105, std. = .063)	5.03	.001
Category 2 (mean = .059, std. = .032) n=60	5.22	.001
Category 2 (mean = .059, std. = .032)		
Category 3 (mean = .032, std. = .025) n=60	8.31	.001
Category 1 (mean = .105, std. = .063)		
Category 3 (mean = .032, std. = .025) n=60		

a All *t*-tests are conducted using natural logarithms of the mean monthly ratios.

b P-value is the probability of observing the computed value of the *t*-statistic if the difference between logged price ratios is zero.

Category 1: Firms that promise equal dividends to both classes.

Category 2: Firms that promise low-vote shareholders at least the dividend paid to high-vote shareholders.

Category 3: Firms that promise low-vote shareholders preferential dividends if dividends are paid.

An F test is used to test for the simultaneous difference of all three category mean ratios. The results, shown in Table 3-5, confirm that the price ratios are significantly different.

TABLE 3-5
F TEST FOR THE COMPARISON OF MORE THAN TWO MEANS

where: F = $\frac{n(\text{sum of squared deviations of means})/(k-1)}{(\text{sum of squared deviations about the means})/k(n-1)}$	F Value
	43.66* (3,177)

* P-Value less than .001

Equations 3-1 and 3-2 use individual firm data as opposed to cross-sectional averages to test whether dividend promises significantly affect the level of stock price ratios between classes.

$$RATIO_i = \alpha_0 + \alpha_1 CAT2_i + \alpha_2 CAT3_i + \varepsilon_i , \quad (3-1)$$

$$\ln(RATIO_i) = \alpha_0 + \alpha_1 CAT2_i + \alpha_2 CAT3_i + \varepsilon_i , \quad (3-2)$$

where:

$RATIO_i$ = Firm i's average monthly price ratio

$\ln(RATIO_i)$ = Firm i's average monthly logged price ratio

α_0 = Intercept

α_j = Parameter estimate for explanatory variable j

$CAT2_i$ = 1 if firm i promises "at least" equal dividends to low-vote shares
0 otherwise

$CAT3_i$ = 1 if firm i promises preferential dividends to low-vote shares
0 otherwise

ε_i = Error term,

The coefficients on the dummy variables, $CAT2$ and $CAT3$, representing the presence of preferential dividend compensation plans, are expected to be negative and significant, confirming the results of the previous section.

The results from Equations 3-1 and 3-2 are presented in Table 3-6. Equation 3-1, with its non-logged dependent variable, is used to provide an intuitive measure of the value of the dividend promise. The regression confirms that firms that offer preferential dividends to low-vote shareholders exhibit classes of stock that trade at significantly lower price ratios. The parameter estimate for the dummy variable representing the promise of preferential dividends implies a 12.1% drop in the price ratio. This compares to the average firm's offer of 10% preferential dividends. This indicates that the dividend sweetener is being valued by the market although some recapitalizing firms have

yet to pay cash dividends. The results from Equation 3-2, with the dependent variable logged to better resemble a normal distribution, are similar except for lower significance levels.

TABLE 3-6
CROSS SECTIONAL ORDINARY LEAST-SQUARES REGRESSIONS
USING MEAN TIME SERIES DATA TO EXPLAIN PRICE RATIOS
(High-Vote/Low-Vote)

	Equation 3-1	Equation 3-2
Intercept	1.156 (32.95) **	0.093 (4.27) **
CAT2 ^a	-0.094 (-1.77) *	-0.037 (-1.11)
CAT3 ^b	-0.121 (-2.53) **	-0.068 (-2.26) **
R ²	.100	.077
Adj. R ²	.071	.047
F Value	3.389	2.549
P-Value	.0402	.0865
Number of Firms	64	64

a CAT2 equals one if firm promises at least an equal dividend to low-vote shareholders; otherwise equals zero.

b CAT3 equals one if firm promises preferential dividend to low-vote shareholders; otherwise equals zero.

** Significant at the 95% level

* Significant at the 90% level

Lease, McConnell, and Mikkelsen (1983) find that 4 out of 30 firms in their sample of equal dividend firms exhibit the low-vote stock trading at a premium to the high-vote stock. The same four firms are also the only firms in the sample to have outstanding voting preferred stock. The presence of this unexplained result is tested in my sample of 64 firms by including a dummy variable

indicating the presence of preferred stock. Seven out of the 64 firms' balance sheets reveal outstanding preferred stock. Although the sign of the parameter estimate is negative as in Lease et al.'s study, this unreported variable is insignificant under every model specification.

Results for Individual Firms

Statistical tests of the price data for individual companies are conducted to supplement the cross-sectional study. The results for firms in categories 1, 2, and 3 are presented in Tables 3-7, 3-8, and 3-9 respectively. Column 2 of each table shows the mean of the time series of mid-month price ratios for each firm. The related sample standard deviation is shown in column 3. The tested null hypothesis is that the mean of the natural logarithm of monthly price ratios equals zero.

$$H_0: \frac{\sum_{i=1}^n \ln\left(\frac{P_H}{P_L}\right)}{n} = 0,$$

where:

P_H = Market price of high-vote stock observed at mid-month

P_L = Market price of low-vote stock observed at mid-month

n = Number of monthly observations

t-statistics are calculated and displayed in column 7. The related P-values are shown in column 8 and are calculated using the number of monthly observations shown in column 6. The results of non-parametric sign tests are given in columns 9, 10, and 11.

Category 1 firms, which promise equal dividends per share to both classes, exhibit the greatest amount of price variability. As shown in Table 3-7, category 1 firms also have the highest sample standard deviation of cross-sectional ratios. Table 3-7 shows that 4 firms out of 22 show an average logged price ratio significantly below zero using both the *t*-test and the sign test. The existence of firms with the low voting stock selling at a premium when equal dividends are offered to both classes suggests that factors other than voting power and dividends affect the price of common stock.

In Table 3-8, all but four firms that offer potentially preferential dividends have logged price ratios significantly greater than zero. None of the ratios are significantly negative.

The results for category 3 firms, which offer preferential dividends to the low-vote shareholders are displayed in Table 3-9. Eight firms out of 25 show average ratios below zero. Five of the means are significantly below zero using both the *t*-test and the sign test.

TABLE 3-7
 TIME SERIES MEAN PRICE RATIOS FOR CATEGORY 1 FIRMS
 (Firms That Promise Equal Dividends) (1984-1988)

Company	Mean	Std	Mean (ln)	Std (ln)	# of obs.	t-stat ^a	Pvalue ^b	# > 1	# < 1	SignTest P-value ^b
American Fructose	0.928	0.055	-0.076	0.060	49	-8.85	0.001	0	45	0.001
American Maize	0.954	0.032	-0.048	0.033	60	-11.13	0.001	3	56	0.001
Associated Comm.	1.022	0.039	0.021	0.037	60	4.33	0.001	41	12	0.001
Baldwin & Lyons	1.109	0.064	0.102	0.059	19	7.45	0.001	18	1	0.001
Beneficial Std.	0.999	0.005	-0.001	0.005	16	-1.25	*	3	6	*
Brown-Forman	0.926	0.036	-0.078	0.038	60	-15.74	0.001	1	59	0.001
Crown Cent Pete	1.186	0.086	0.168	0.072	60	17.99	0.001	60	0	0.001
Dickenson Mines	1.175	0.189	0.149	0.157	30	5.19	0.001	22	3	0.008
Equitable Iowa	1.021	0.032	0.020	0.031	60	5.01	0.001	46	12	0.001
First AM B&T	1.316	0.324	0.248	0.227	60	8.47	0.001	52	6	0.001
First Cit. Bank	1.570	0.164	0.446	0.099	25	22.46	0.001	25	0	0.001
Hubbell Inc	0.992	0.029	-0.009	0.029	60	-2.25	0.025	20	37	0.016
Malrite Comm.	1.048	0.053	0.046	0.050	42	5.88	0.001	32	7	0.001
Multnomah Kennel	1.217	0.147	0.189	0.122	45	10.42	0.001	40	0	0.001
Nielsen A.C.	1.003	0.008	0.003	0.008	8	1.01	*	3	1	*
Odetics	1.211	0.137	0.186	0.106	50	12.38	0.001	50	0	0.001
Plymouth Rubber	1.112	0.280	0.081	0.214	60	2.94	0.005	29	20	*
Presidential Realty	1.138	0.154	0.121	0.127	60	7.39	0.001	53	5	0.001
Republic Pictures	1.081	0.137	0.071	0.119	40	3.74	0.001	29	9	0.001
Resorts Intl.	1.745	1.171	0.426	0.469	47	6.23	0.001	46	1	0.001
Tele Comm.	0.995	0.033	-0.005	0.033	60	-1.21	*	24	34	0.100
Westmarc Comm.	0.994	0.049	-0.007	0.049	53	-1.05	*	28	23	*

a All *t*-tests are conducted using the natural logarithms of the mean monthly ratios.

b P-value is the probability of observing the computed value of the *t*-statistic if the log of the true price ratio is zero.

* P-Value greater than 0.10

TABLE 3-8
TIME SERIES MEAN PRICE RATIOS FOR CATEGORY 2 FIRMS
(Firms That Promise "at least an equal dividend") (1984-1988)

Company	Mean	Std	Mean (ln)	Std (ln)	# of obs.	t-stat ^a	Pvalue ^b	# > 1	# < 1	Sign Test P-value ^b
Alberto Culver	1.221	0.118	0.195	0.099	30	10.74	0.001	28	2	0.001
Autodynamics	1.025	0.039	0.024	0.038	6	1.57	0.100	2	0	*
Base Ten Sys.	1.096	0.074	0.089	0.065	60	10.69	0.001	59	1	0.001
Bio Rad Labs	1.000	0.014	-0.000	0.014	60	-0.05	*	22	29	*
Charter Med. Corp.	1.006	0.032	0.005	0.031	56	1.21	*	19	28	*
Dairy Mart Stores	1.021	0.053	0.020	0.051	38	2.36	0.025	23	11	0.020
Diagnostic Retr	1.127	0.089	0.116	0.077	60	11.64	0.001	57	2	0.001
Key Co.	1.079	0.096	0.073	0.086	32	4.79	0.001	21	3	0.001
McRae Inds. Inc.	1.003	0.089	-0.001	0.083	60	-0.07	*	20	29	0.100
Methode Electnc	1.037	0.066	0.034	0.062	60	4.30	0.001	40	12	0.001
Moog Inc	1.069	0.165	0.056	0.137	60	3.19	0.005	34	20	0.030
Pasquale Food	1.038	0.076	0.035	0.070	36	2.99	0.005	21	13	0.090
Saunders System	1.005	0.049	0.004	0.047	31	0.45	*	10	12	*
Smith A & O Corp	1.076	0.048	0.073	0.044	60	12.70	0.001	58	1	0.001
Thomaston Mills.	1.079	0.039	0.075	0.036	6	5.18	0.005	6	0	0.016
Watsco	1.096	0.090	0.088	0.081	54	8.06	0.001	44	5	0.001
Wiley John & Sons	1.080	0.107	0.073	0.094	60	6.01	0.001	48	9	0.001

a All *t*-tests are conducted using the natural logarithms of the mean monthly ratios.

b P-value is the probability of observing the computed value of the *t*-statistic if the log of the true price ratio is zero.

* P-Value greater than 0.10

TABLE 3-9
TIME SERIES MEAN PRICE RATIOS FOR CATEGORY 3 FIRMS
(Firms That Promise Preferred Dividends) (1984-1988)

Company	Mean	Std	Mean (ln)	Std (ln)	# of obs.	t-stat ^a	Pvalue ^b	# > 1	# < 1	Sign Test P-value ^b
Blount Inc.	0.994	0.016	-0.006	0.016	60	-3.10	0.005	16	35	0.003
Canandaigua Wine	1.033	0.046	0.031	0.044	30	3.89	0.001	19	6	0.007
Care Corp.	1.037	0.057	0.034	0.054	33	3.68	0.001	23	4	0.001
Care Enterprises	1.345	0.514	0.246	0.300	30	4.49	0.001	28	1	0.001
Everest & Jennings	1.095	0.124	0.085	0.106	60	6.26	0.001	43	8	0.001
Figgie Intl. Hold.	1.145	0.098	0.132	0.083	35	9.44	0.001	35	0	0.001
Food Lion	1.086	0.066	0.081	0.059	60	10.61	0.001	55	0	0.001
Forest City Enter.	0.997	0.013	-0.003	0.013	59	-1.62	0.100	21	29	*
Hechinger Co.	1.019	0.038	0.018	0.036	60	3.91	0.001	27	11	0.008
Homestead Fin	0.977	0.024	-0.024	0.024	24	-4.91	0.001	3	18	0.001
Int. Dairy Queen	0.997	0.027	-0.003	0.027	35	-0.06	*	14	16	*
Kelly Svcs. Inc.	1.006	0.030	0.005	0.030	53	1.30	*	25	17	*
Liberty Homes	1.005	0.035	0.004	0.035	44	0.84	*	20	15	*
Merchants Capital	0.800	0.216	-0.261	0.290	28	-4.77	0.001	5	21	0.001
Mobile Comm.	1.023	0.033	0.022	0.032	60	5.31	0.001	39	11	0.001
Oriole Homes	1.014	0.035	0.013	0.035	60	2.95	0.005	33	17	0.016
Presidio Oil	0.969	0.073	-0.035	0.078	21	-2.03	0.050	7	10	*
Restaurant Assoc.	1.137	0.085	0.125	0.076	27	8.56	0.001	24	1	0.001
Schwartz Brothers	0.966	0.061	-0.036	0.066	6	-1.35	*	0	2	*
Sequa Corp.	1.037	0.062	0.037	0.020	24	9.16	0.001	24	0	0.001
Three D Depts.	1.034	0.050	0.033	0.047	60	5.39	0.001	35	10	0.001
Turner Broadcast.	1.071	0.108	0.064	0.097	16	2.63	0.010	10	5	*
United Foods	1.046	0.113	0.040	0.102	60	3.01	0.005	25	12	0.021
Visual Graphics	1.045	0.049	0.043	0.046	22	4.38	0.001	20	1	0.001
Wang Labs	0.996	0.032	-0.004	0.033	60	-0.99	*	20	30	0.100

a All *t*-tests are conducted using the natural logarithms of the mean monthly ratios.

b P-value is the probability of observing the computed value of the *t*-statistic if the log of the true price ratio is zero.

* P-value greater than 0.10

CHAPTER 4 THE IMPACT OF FIRM SPECIFIC VARIABLES

Introduction

In Chapter 3, I find that the form of the dividend promise to the low-vote shareholders is significantly related to the price ratio between the high-vote and low-vote stock. This evidence suggests that outside shareholders value the promise of preferential dividends from insiders. Also in Chapter 3, I find that voting premiums measured from 1984-1988 increased significantly over those reported by Lease, McConnell, and Mikkelsen (1983) relating to their pre-1979 sample. This finding is consistent with the increase in hostile takeover activity during my sample period. It also supports the theory that voting premiums stem from outsiders buying an option to participate in possible future control contests when preferential offers may be made to high-vote shareholders.

In this chapter, I examine the impact of firm specific variables on the behavior of dual-class firms. In the first section, I supplement the findings in Chapter 3 by measuring the impact of firm specific variables on price ratios. In the next section, I investigate the factors that may motivate the promise of preferential dividends by insiders and explain why outsiders price the promises. Finally, I examine the behavior of price ratios as a function of time from the recapitalization.

The Impact of Firm Specific Variables on Price Ratios

In this section, I use pooled, cross-sectional, time series data to investigate the impact of firm specific variables on the observed price ratios. I am interested in the pricing impact of: (1) actual dividend policy given the form of the dividend promise, (2) the presence of a control threat, (3) differences in liquidity between stock classes, (4) the percentage of insider ownership, and (5) the voting power of the low-vote stock.

Description of the Study

The use of averages of time-series data in the previous chapter is useful in determining group characteristics. It is less useful when evaluating firm specific variables that are likely to vary from year to year. In this chapter, I use information gathered for each firm from August of each year in the sample period. August was randomly selected as a representative month. Much of the firm specific information is provided annually (i.e., dividends and insiders' percentage ownership) so gathering information from each month would provide redundant data. I present cross-sectional results for each year of the sample period and for the pooled results that contain up to 5 observations from each firm. This pooling process results in 240 cross-sectional observations from the period 1984-1988.

The average price ratios of the 64 firms (240 observations) grouped by the form of their dividend promise are displayed in Table 4-1.

TABLE 4-1
AVERAGE PRICE RATIOS FROM THE POOLED CROSS-SECTIONAL DATA
OF 64 FIRMS OBSERVED DURING AUGUST OF EACH YEAR (1984-1988)

Dividend Promise	Number of Observations	Mean Price Ratio	Standard Deviation Of Mean Price Ratio	t-value on difference from 0.0
Equal	88	1.1254	0.2501	4.70 **
"At Least"	66	1.0625	0.1082	4.69 **
Preferred	86	1.0383	0.1086	3.27 **

** Significant at the 95% level

Consistent with the results in the previous chapter, the price ratios remained stratified by the form of dividend promise. Firms that promise equal dividends to both classes exhibit the largest voting premium while firms that promise some form of dividend compensation exhibit lower ratios.

The actual dividend policy of the 64 firms (240 observations) grouped by the form of their dividend promise are displayed in Table 4-2.

TABLE 4-2
DIVIDEND POLICY FROM THE POOLED CROSS-SECTIONAL DATA OF 64 FIRMS OBSERVED DURING AUGUST OF EACH YEAR (1984-1988)

Dividend Promise	Number of Observations	No Dividends	Equal Dividends	Preferential Dividends
Equal	88	40	48	N.A.
"At Least"	66	18	25	23
Preferred	86	14	N.A.	72

N.A. - Not Applicable

Of the 86 observations from 25 firms that promise preferred dividends, 72 paid dividends in the sampled quarter (all were preferential). Of the 66 observations from 17 firms that promised low-vote shareholders at least an equal dividend, there were 23 observations of preferential dividends, 25 observations of equal dividends, and 18 cases where no dividends were paid. Of the 88 observations from firms promising equal dividends, 48 paid dividends while 40 did not. The

possible motivation for these dividend payments is discussed in the next section of this chapter.

To examine the explanatory power of dividend promises, dividend payments, control events and liquidity on price ratios, I use the regression model displayed in Equation 4-1. The specification and expected impact of the independent variables are discussed below.³³ The results from Equation 4-1 are displayed in Table 4-3.

(4-1)

$$\ln(RATIO_i) = \alpha_0 + \alpha_1 CAT2_i + \alpha_2 CAT3_i + \alpha_3 INT2_i + \alpha_4 INT3_i + \alpha_5 CON_i + \alpha_6 LNHVV_i + \alpha_7 LNLVV_i + \varepsilon_i$$

where,

$\ln(RATIO)$ = The natural logarithm of firm i's average price ratio for the month

α_0 = Intercept

$CAT2_i$ = 1 if firm i promises "at least" equal dividends to low-vote shares
= 0 otherwise

$CAT3_i$ = 1 if firm i promises preferential dividends to low-vote shares
= 0 otherwise

$INT2_i$ = $\{CAT2_i * (\text{low-vote dividend} - \text{high-vote dividend})\} / (\text{high-vote price} + \text{low-vote price})/2\}$

$INT3_i$ = $\{CAT3_i * (\text{low-vote dividend} - \text{high-vote dividend})\} / (\text{high-vote price} + \text{low-vote price})/2\}$

CON_i = 1 if there is evidence of a control issue within the 6 months before the observation date
= 0 otherwise

$LNHVV_i$ = The natural logarithm of firm i's average high-vote trading volume

$LNLVV_i$ = The natural logarithm of firm i's average low-vote trading volume

ε_i = Error term,

³³ I also test for the impact of the percentage of insider ownership and the form of the voting arrangement but I find both variables insignificant under every specification. I discuss my attempts to measure these variables later in this section.

Dividend Policy (CAT2, CAT3, INT2, INT3)

The dividend variables represent the impact of actual dividends as well as dividend promises. I examine actual dividend payments because both forms of preferential dividend promises allow managers to avoid paying higher dividends to the low-vote shareholders by simply not paying dividends, or in the case of the promise to pay "at least" equal dividends, paying both classes the same dividend. It is interesting to note that, as shown in Table 4-2, actual dividend policies for firms that offer at least an equal dividend are nearly evenly distributed between no dividends, equal dividends, and preferred dividends. In addition, Table 4-2 shows that most firms that promise preferential dividends pay preferential dividends. Thus, while preferential dividend promises imply possible preferential dividends, dividend payments resolve uncertainty and reflect the actual dividend intentions of management.

I do not use actual preferential dividends as an explanatory variable since this would also capture the form of the dividend promise because only firms that promise preferential dividends can pay them. Instead, I construct interactive variables that reflect the relative size of the preferential dividend and the related dividend promise. For example, *INT2* is calculated by taking the low-vote dividend minus the high-vote dividend and then dividing by the average market price of the two stock classes. This preferential dividend yield is then multiplied by the dummy variable indicating whether the firm promised at least equal dividends to the low-vote shareholders. This technique allows me to measure whether the payment of preferential dividends offers additional explanatory power beyond the promise of optional preferential dividends. The variable *INT3* is calculated in the same way except that the preferential dividend yield is multiplied by the dummy variable indicating that the firm promised preferential dividends. I expect that the interactive parameter estimates will be negative and

significant as actual dividend policy reveals management's true dividend intentions.

Control Threats (CON)

Although previous studies establish that voting rights have value, the source of the benefits that support the value remains elusive. The typical explanation is that managers prefer high-vote stock because it allows them to secure voting control, thus ensuring a long relationship with their firm. This explanation of the source of the premiums does not explain why control premiums exist even when control of the firm is tightly held.

The market price of common stock reflects the supply and demand of marginal shareholders who are actively trading in the stock. Once a firm has an established group of dominant shareholders, then purchasing high-vote stock will not qualify outsiders for management positions that might allow for the extraction of the benefits. In addition, inside shareholders who have already secured their management positions are unlikely to remain active in the market and should not significantly affect the price. As long as a dominant shareholder group exists, outsiders should be unwilling to pay a premium for high-vote stock and insiders should not be sufficiently active in the market to influence the price. Thus, the observed premiums may not always directly reflect the value of control related to securing an employment position.

When a dominate shareholder group does not exist, and control of the firm is contested, then it is likely that the marginal shareholders will be insiders or potential insiders who will offer a premium price for high-vote stock. Although most dual-class firms promise both classes equal distributions during liquidation, shareholders may be offered differential premiums in an acquisition. DeAngelo

and DeAngelo (1985) document that 4 out of 30 acquisitions of dual-class firms from the period 1960-1980 included negotiated premiums to high-vote shares. The premiums ranged from 83.3% to 200%. Megginson reports that 43 out of 152 British dual-class firms were acquired between 1955-1982. Out of the 43 successful acquisitions, 37 included preferential offers to high-vote shareholders. The premiums ranged from 1.6% to 260%.

The existence of differential takeover offers suggests an explanation for long-lived control premiums. Outsiders may be willing to pay a premium for high-vote stock, even during periods when control is consolidated, as an option to participate in the profits from possible future control contests. There is evidence of tightly held family firms that seem immune to takeover threats but subsequently become a target when an important family member dies. Thus, outside shareholders who never intend to directly receive the benefits of control, may receive takeover premiums if the firm becomes involved in a control contest.

I test the impact of increased expectations of a takeover on pre-takeover stock prices across voting classes. The variable CON is a dummy variable indicating the presence of a control threat. It was constructed by searching the *Wall Street Journal*, *Barrons*, and the *Dow Jones News Service* for news of control contests within the six months before each August observation. Specifically, I searched for the key words; control, takeover, votes, buyout, and tender. I defined control contests liberally and many "events" did not result in a change of control. Any news of action taken toward securing a larger ownership block was considered the presence of a control contest. In some cases, the "pressure" came from outside the firm with either a formal takeover offer or the news that an outsider had acquired a significant block of stock and was considering a takeover offer. In other cases, the pressure came from within the firm as management groups announced their intent to obtain greater control and

perhaps take the firm private. I expect this variable to be positive and significant.

Liquidity (*LNHVV*, *LNLVV*)

The price ratio of dual-class stock is generally assumed to be a function of voting power and expected cash flows. However, the price ratio may also reflect differences in the liquidity of the two classes of stock. For companies in my study, high-vote shares are often thinly traded compared to low-vote shares. On average, low-vote shares in my sample traded at 6.36 times the volume of high-vote shares.³⁴ Since liquidity is expected to be positively related to price, this result suggests that the observed high-vote premium is not inflated by liquidity differences. If anything, liquidity differences should reduce the voting premium and may provide some explanation for the existence of four equal dividend firms exhibiting negative voting premiums.

Since cross-sectional differences in liquidity may affect the price ratio, I control for liquidity by in the following way. I construct variables defined as *LNHVV* and *LNLVV*. The *LNHVV* variable is the natural logarithm of the average August trading volume for high-vote shares and will exhibit a positive relationship if liquidity is reflected in price. If low trading volume reduces the liquidity of high-vote shares, then the price of the high-vote stock price will fall and the price ratio will also fall. Alternatively, low trading volume may indicate that the high-vote shares are considered very valuable by insiders and so a negative relationship might be observed. *LNLVV* is the corresponding average August trading volume for low-vote shares and is expected to have a neutral or

³⁴ Megginson (1990) also finds that low-vote shares are more actively traded than high-vote shares in his study of British dual-class firms.

negative impact on average price ratios. If low trading volume reduces the liquidity of low-vote shares, then the low-vote stock price will fall and the price ratio will increase. Because the low-vote shares are generally actively traded there may be no measurable liquidity impact on this class.³⁵

Regression Results

The results from Equation 4-1 are presented in Table 4-3. The parameter estimates for variables *CAT2*, *CAT3*, and *INT3* are negative and significant for the pooled, 1984-1988 sample. These variables are generally not significant in individual years. *INT2* is negative as expected but not significant at the 90% level. In Chapter 3, I find that preferential dividend promises are valued and effectively reduce the observed voting premiums. The results from this test

³⁵ I also attempt to control for liquidity differences between stock classes by computing the ratio of *LNHVV* and *LNLVV*. The parameter estimate for this independent variable is expected to be positive if the thin trading of high-vote stock is significantly related to the price ratio. I find this variable insignificant.

I also use Roll's (1984) measure of the bid-ask spread to estimate liquidity differences. The relationship is expressed in Equation 4-2.

$$\% \text{Spread} = 2\sqrt{-\text{Cov}(R_t, R_{t-1})} \quad (4-2)$$

If a firm's high-vote stock is thinly traded then its bid-ask spread should exceed the bid-ask spread of the more frequently traded low-vote stock. The use of returns versus prices yields a percentage spread as opposed to a dollar spread. The calculation of the liquidity variable is reflected by Equation 4-3.

$$\% \text{ Spread} (\text{High-vote stock}) - \% \text{ Spread} (\text{Low-vote stock}) \quad (4-3)$$

Daily returns for the covariance calculations are gathered from the 40 trading days preceding the month of August. If liquidity concerns relating to the high-vote stock are important then the spread variable will negatively affect the price ratio of high-vote stock divided by low-vote stock. I find this variable insignificant under all model specifications.

support the results in Chapter 3 and provide evidence that preferential dividend payments by firms that promise preferential dividends are also effective in reducing observed price ratios.

TABLE 4-3
ORDINARY LEAST SQUARES REGRESSION RESULTS FROM
EQUATION 4-1 USING CROSS-SECTIONAL AND POOLED CROSS-
SECTIONAL DATA TO EXPLAIN LOGGED PRICE RATIOS

	1984-88	1984	1985	1986	1987	1988
Intercept	0.183 (4.19)**	0.262 (3.08)**	0.275 (2.69)**	-0.028 (0.27)	0.164 (1.67)*	0.265 (2.48)**
CAT2	-0.037 (-1.65)*	-0.084 (-1.69)*	-0.030 (-0.58)	-0.019 (-0.36)	-0.056 (-1.18)	-0.014 (-0.24)
CAT3	-0.040 (-1.68)*	-0.075 (-1.36)	-0.023 (-0.27)	-0.071 (-1.02)	-0.067 (-1.45)	-0.028 (-0.50)
INT2	-0.219 (-1.20)	-0.378 (-0.45)	-0.916 (-1.58)	0.469 (0.55)	-0.137 (-0.490)	-0.286 (-0.84)
INT3	-0.359 (-2.16)**	-0.141 (-0.61)	-0.408 (-0.41)	0.701 (0.81)	-0.109 (-0.34)	-1.127 (-2.85)**
CON	0.136 (5.51)**	0.077 (0.63)	-0.023 (-0.26)	0.096 (1.88)*	0.215 (3.63)**	0.174 (3.60)**
LNHVV	-0.006 (-0.95)	-0.015 (-1.24)	-0.005 (-0.35)	0.018 (1.22)	0.003 (0.27)	-0.020 (-1.29)
LNLVV	-0.010 (-1.72)*	-0.011 (-0.95)	-0.023 (-1.80)*	-0.001 (-0.11)	-0.013 (-1.05)	-0.013 (-0.85)
R ²	.184	.261	.201	.120	.264	.414
Adj. R ²	.159	.094	.032	-0-	.155	.323
F Value	7.47	1.57	1.19	0.85	2.41	4.54
P-Value	0.0001	0.1830	0.3374	0.5501	0.0341	.0007
Observations	240	39	41	52	55	53

* Significant at the 90% level.

** Significant at the 95% level.

CAT2 = 1 if firm promises at least an equal dividend to low-vote shareholders;
otherwise = 0

CAT3 = 1 if firm promises preferential dividend to low-vote shareholders;
otherwise = 0

CON = 1 if the firm was subject to control pressure within 6 months of August
otherwise = 0

$\text{INT2} = [(\text{low-vote dividend} - \text{high-vote dividend})/\text{average price}] \times \text{CAT2 dummy variable}$
 $\text{INT3} = [(\text{low-vote dividend} - \text{high-vote dividend})/\text{average price}] \times \text{CAT3 dummy variable}$
 $\text{LNHVV} = \text{the natural logarithm of the high-vote trading volume for the month of August}$
 $\text{LNLVV} = \text{the natural logarithm of the low-vote trading volume for the month of August}$

The CON variable is positive and significant in the pooled sample and in the years 1986-1988. The significance in the last three years of the five year study corresponds to the increase in takeover activity during the period. I conclude that the possibility of a takeover premium may induce outside shareholders to pay a premium for high-vote shares even when they have no interest in exercising actual control of the firm. This motivation for ownership of high-vote stock by outsiders may explain why control premiums exist during periods when firms are tightly held.

To provide further information about the impact of control threats, I examine the circumstances surrounding the trading disappearance of 11 firms from my sample of 64 firms during the period 1984-1988. The results of the survey, shown in the Appendix, provide further evidence that takeovers influence stock price ratios. Of the eleven firms in my sample that ceased trading during the period 1984-1988, eight were the targets of successful control contests. Although six firms ultimately received equal takeover bids to both classes, Care Enterprises and Resorts International provide excellent examples of preferential takeover treatment of high-vote shares. The price ratios of firms involved in control contests often rise as high-vote shareholders anticipate the greater possibility of a premium offer to the high-vote shares. When the nature of the takeover offer is revealed the price ratios quickly reflect the new information. For example, in 1987 Southmark Corporation pursued Care Enterprises, a dual-class firm. Southmark intended to selectively offer premiums to only the high-vote shares. Before news of the acquisition, the price ratio of Care Enterprises traded near 1.10. During the negotiations with Southmark the ratio climbed as

high as 3.0. Ultimately the acquisition was abandoned and the price ratio returned to near 1.0. In 1988, the firm declared Chapter 11 bankruptcy.

The *LNHVV* variable is not significant in any year or in the pooled data. This may imply that liquidity problems are not significant for high-vote stock or it may imply that *LNHVV* is not a good proxy for liquidity. Alternatively, low trading volume might be a symptom of high-vote shares with great value. If the value of the vote is very high then insiders will have even greater incentive to hold their shares. The *LNLVV* variable is negative and significant at the 90% level using the pooled data. Firms with thinly traded low-vote stock exhibit higher price ratios.

Megginson (1990) finds that the high-vote premium is positively and linearly related to insider holdings of high-vote shares. I am unable to find a similar relationship in my sample.³⁶ I am similarly unable to find a significant relationship between price ratios and the form of the voting arrangement.³⁷

³⁶ I measure the percentage of insider holdings in both the high-vote and low-vote shares by gathering information from annual corporate proxy statements. I define insiders as board members, managers, and other related stockholders with significant holdings. On average I find that insiders own 50.97% of the high-vote stock and 32.07% of the low-vote stock.

It may not be surprising that I do not find a linear relationship between insider ownership and dual-class price ratios. McConnell and Servaes (1990) find a significant curvilinear relationship between firm value and the percentage of insider ownership. Specifically they find a "u-shaped" relationship where firm value first increases as insider ownership climbs and then falls when insider ownership reaches higher values. In a similar study, Morck, Schleifer, and Vishny (1988) find that firm value increases, declines, and then increases again as ownership by the board of directors rises.

I attempt to capture the nonlinear nature of insider ownership by creating dummy variables designed to reflect cases where the percentage of insider ownership of high-vote shares lies in a range that makes control contests most likely. To estimate that range, a dummy variable is constructed which equals 1 if insider ownership is between 40% and 60%. The same test is also conducted with insider ownership defined between 40% and 50%. Regression analysis reveals

The Promise and Pricing of Preferential Dividends

Chapter 3 and the previous section of this chapter document that preferential dividend promises and payments reduce the price ratios between dual-classes of common stock. This result raises three interesting questions. First, why do insiders offer preferential dividends to low-vote shareholders? Second, why are the preferential dividend promises priced by outside shareholders? Third, why do insiders pay preferential dividends?

These questions arise because insiders appear to have the ability and the incentive to withhold dividends or at least not pay preferential dividends. Insiders tend to hold the high-vote, low-dividend class of shares. In my sample, insiders hold an average of 50.97% of high-vote stock and 32.07% of low-vote stock. When preferential dividends are offered and paid to the low-vote shares, insiders receive a disproportionately small amount of the proceeds. In contrast, stock price appreciation allows insiders to share at least equally in cash distributions. Instead of paying preferential dividends, insiders can retain the firm's cash and invest in positive net present value projects. Ultimately, insiders can sell their shares at equal or preferential terms. In a non control event, the insider will probably sell high-vote shares at a small premium above the low-vote price. The existence of this average premium is documented in Chapter 3. In a

that insider ownership is also not significant when measured linearly or as a dummy variable described above.

³⁷ In all 64 firms, the high-vote stock effectively has the power to control the board of directors. In most cases the low-vote stock is assured the election of a minority portion of the board of directors. In 11 out of 64 firms, the high-vote stock has exclusive voting rights. I create a dummy variable indicating a firm with low-vote stock that is actually no-vote stock. I find this dummy variable to be insignificant.

control contest, the insider may sell high-vote shares at a significant premium over low-vote prices. The existence of premium offers to high-vote shares during hostile takeovers is documented earlier in this chapter.

In this section, I first discuss possible explanations for the offer, pricing, and payment of preferential dividends to low-vote shareholders. I then use statistical tests to support my explanations.

Insiders promise preferential dividends to low-vote shares because they must expect to benefit from the promise. Outsiders may consider preferential dividend promises compensation for the pending loss of voting power. As a result, the promises may encourage outsiders to approve the dual-class recapitalization when it is proposed. In addition, most recent recapitalizations allow and depend on outsiders converting their high-vote shares to low-vote shares. Without preferential dividends, only liquidity concerns might cause outside shareholders to convert. Finally, insiders may promise preferential dividends because they anticipate the need to issue low-vote equity in the future and they expect to utilize the signaling benefit of dividends.

Although there are potential benefits to insiders from promising preferential dividends, it is not immediately clear why outsiders should believe the promises. After the recapitalization, insiders often have majority control of the firm and can effectively negate the preferential promises by completely withholding dividends in cases where preferential dividends are promised or by paying only equal dividends if "optional" preferential dividends are promised. The pricing of preferential dividend promises depends on outsiders believing that it is in the best interests of insiders to follow through with their promise. In order for this to be the case, there must be benefits to insiders from paying preferential dividends and/or costs of not following through with the promise.

I contend that the personal wealth constraints and portfolio concerns of insiders, along with the need to issue additional low-vote equity, provide significant motivation for insiders to pay preferential dividends. If outsiders believe that insiders are motivated to pay preferential dividends then they will believe and price the preferential dividend promises.

Firms recapitalize to two classes of common stock, at least in part, because the personal wealth constraints and/or diversification concerns of insiders often prevent them from increasing their ownership share. Insiders often have their investment portfolio and human capital dependent on their firm's performance. Finance theory indicates that, absent concerns about voting power, insiders should prefer a more diversified portfolio. Dual-class recapitalizations result in managers with reduced ownership and increased voting power. Thus, a dual-class recapitalization may signal that managers intend to reduce their investment in the firm. The payment of cash dividends is an effective strategy for withdrawing value from the firm without reducing voting power. When outside shareholders perceive that managers also want to receive dividends, then the promise of preferential dividends to low-vote shares is more credible.

Firms also recapitalize because they intend to issue low-vote equity. Some proxy statements explicitly state the possibility of a low-vote stock issue after the recapitalization. Other proxy statements allude to the possibility by referring to added capital structure flexibility. Many recapitalizing firms are in growth industries with pre-existing dominant shareholders.³⁸ When internal financing is not sufficient to finance all positive net present value (NPV) projects,

³⁸ In Chapter 5, I present evidence that dual-class firms enjoy strong growth opportunities. Lehn, Netter and Poulsen (1989) also find evidence that dual-class firms have relatively high growth rates.

management is faced with the dilemma of issuing debt, issuing equity, or bypassing the projects. Finance theory states that, absent agency problems, all positive NPV projects should be undertaken regardless of the method used to finance the investment. However, management may not issue new equity if ownership control is lost. As stated above, personal wealth constraints and diversification concerns often prevent managers from joining equitably in new issues. Debt may not be attractive to management because interest obligations reduce free cash flow and owners may fear creditor involvement and the partial loss of control. In addition, the relative small size of many dual-class firms, along with the high concentration of manager ownership, may make debt issues unattractive to the capital market. The solution for these firms is to offer a second class of low-voting common stock that allows management to maintain control and access all positive NPV projects.

Generally, when insiders intend to issue equity, they have the incentive to support the market price of the stock. To support the low-vote stock price management may take steps like promising and paying preferential dividends. Preferential dividend payments enhance the market value of low-vote shares in several ways. First, higher dividends have cash value to shareholders. Second, higher dividends reduce the free cash flow of the firm. This provides insiders with fewer opportunities to consume firm value and signals low-vote shareholders that they can be less concerned about possible agency problems. Third, promising preferential dividends, and then following through with the payments enhances the firm's reputation and signals that insiders do not intend to harm the outside shareholders.

Asquith and Mullins (1986) argue that dividend payments are credible vehicles to carry managements' assessments of firm value to the investor. In equity offers, significant uncertainty often exists regarding the value of the

assets in place. In the absence of effective signals of firm value, good firms are pooled with bad firms and effectively subsidize the bad firms' offers. Higher dividends must mean that the firm has positive NPV projects or the insiders in the firm will ultimately suffer from providing an incorrect signal. Dividends are costly signals because the payments require cash flow that the firm must generate internally or persuade the capital markets to supply. Preferential dividends are especially costly to insiders because they tend to hold the high-vote, low dividend shares.

In summary, insiders may promise preferential dividends because they need to signal strong firm value when they issue low-vote equity. Outsiders consider preferential dividend signals persuasive because they cannot be mimicked without costs and because the cost is higher to insiders that are most likely to know the firm's true value. Thus, outsiders are more likely to price preferential dividend promises when they perceive a high probability of future equity offers.

I use means tests and LOGIT analyses to investigate whether the above explanations of the offering, pricing and paying of preferential dividends are reflected by the data from my sample firms. Table 4-4 shows the descriptive statistics that are generated when dual-class firms are grouped based on whether they issued equity within one year of the recapitalization. Equation 4-4 is used to test for statistical differences in means between two binomial distributions. The results are shown in Column 4 of Table 4-4.

$$Z = \frac{P_a - P_b}{\sqrt{\frac{P_a Q_a}{N_a} + \frac{P_b Q_b}{N_b}}}, \quad (4-4)$$

Firms that issue equity are statistically more likely to offer preferred or "at least" equal dividends to their low-vote shareholders. This evidence supports the

theory that preferential dividends are promised because insiders intend to issue low-vote equity soon after the recapitalization. The payment of preferential dividends, the ability to convert high-vote stock to low-vote stock, and the percentage of insider ownership before recapitalization are not significantly different between groups of firms.

TABLE 4-4
DESCRIPTIVE STATISTICS BASED ON WHETHER FIRMS ISSUED
EQUITY WITHIN ONE YEAR OF THE RECAPITALIZATION

Firm Characteristics	Firms that issued equity within one year of the recapitalization	Firms that did not issue equity within one year of the recapitalization	$Z = \frac{P_a - P_b}{\sqrt{\frac{P_a Q_a + P_b Q_b}{N_a N_b}}}$
Promise of preferential or at least equal dividends	14/17 (82.4%)	28/47 (59.6%)	1.96 **
Payment of preferential dividends	7/17 (41.2%)	18/47 (38.3%)	0.21
Existence of conversion privilege	11/17 (64.7%)	27/47 (57.4%)	0.53
Pre-Recapitalization insider holdings	45.6%	47.7%	0.16

* Significant at the 95% level.

To further investigate the relationship between preferred dividend promises and the subsequent decision to issue equity, I perform the LOGIT analysis represented in Equation 4-5. The results from Equation 4-5 are shown in Table 4-5.

$$EQUITY_i = f(PREF_i) \quad (4-5)$$

where,

$$EQUITY_i = 1 \text{ if firm } i \text{ issued equity within one year after the recapitalization} \\ = 0 \text{ otherwise}$$

$$PREF_i = 1 \text{ if firm } i \text{ promises possible preferential dividends to low-vote shares} \\ = 0 \text{ otherwise}$$

TABLE 4-5
LOGIT ANALYSIS OF THE DECISION TO ISSUE EQUITY
WITHIN ONE YEAR AFTER RECAPITALIZATION

	Parameter Estimate (Chi-Square)
Intercept	1.846 (8.83)**
<i>PREF</i>	1.153 (2.70)*
Number of Observations	64

** Significant at the 95% level

* Significant at the 90% level

The LOGIT analysis confirms that subsequent offers of low-vote equity are significantly related to firms that offer low-vote shareholders preferred dividends.

Table 4-6 shows the descriptive statistics that are generated when sample firms are grouped based on whether they promise preferred or potentially preferred dividends versus equal dividends. Firms that offer preferred or potentially preferred dividends are more likely to issue equity within one year of recapitalization. Conversion privileges are significantly related to the promise of preferred dividends. The percentage of insider ownership before recapitalization is not significantly different between groups of firms.

To further investigate the relationship between equity issues and conversion privileges on the decision to promise preferential dividends, I perform the LOGIT analysis represented in Equation 4-6. The results from Equation 4-6 are displayed in Table 4-7.

TABLE 4-6
DESCRIPTIVE STATISTICS BASED ON THE FORM OF
DIVIDEND PROMISE TO THE LOW-VOTE SHAREHOLDERS

Firm Characteristics	Firms that offered preferred or at least equal dividends to low-vote shareholders	Firms that did not offer preferred or at least equal dividends to low-vote shareholders	$Z = \frac{P_a - P_b}{\sqrt{\frac{P_a Q_a}{N_a} + \frac{P_b Q_b}{N_b}}}$
Equity issue within one year after recapitalization	14/42 (33.3%)	3/22 (13.6%)	1.91*
Payment of preferential dividends	25/42 (59.5%)	0/22 (0%)	Not Applicable
Existence of conversion privilege	33/42 (78.6%)	5/22 (22.7%)	5.11**
Pre-recapitalization insider holdings	46.2%	49.2%	0.31

* Significant at the 90% level

** Significant at the 95% level

$$PREF_i = f(EQUITY_i, CONV), \quad (4-6)$$

where,

$PREF_i = 1$ if firm i promises possible preferential dividends to low-vote shares
 $= 0$ otherwise

$EQUITY_i = 1$ if firm i issued equity within one year after the recapitalization
 $= 0$ otherwise

$CONV_i = 1$ if firm i allows conversion of high-vote shares to low-vote shares
 $= 0$ otherwise

TABLE 4-7
LOGIT ANALYSIS OF THE DECISION TO PROMISE
PREFERENTIAL DIVIDENDS

	Parameter Estimate (Chi-Square)
Intercept	-0.980 (4.14)**
$EQUITY$	1.344 (2.73)*
$CONV$	2.560 (15.55)**
Number of Observations	64

** Significant at the 95% level

* Significant at the 90% level

The LOGIT analysis shows that the decision to promise preferential dividends is a function of the intent to issue low-vote equity and to encourage conversion of high-vote shares to low-vote shares.

To summarize, I have provided evidence of a link between dividend promises and subsequent equity issues. In Equation 4-7, I test whether the decision to actually pay preferential dividends is related to equity issues subsequent to the recapitalization. I limit my sample for this calculation to firms that promised a preferential dividend or "at least" an equal dividend. I expect to find that, among firms that promise preferential dividends, those that issue equity have greater incentive to fulfill the promise.

$$PREFDIV_i = f(EQUITY_i), \quad (4-7)$$

where,

$$\begin{aligned} PREFDIV_i &= 1 \text{ if firm } i \text{ pays a preferential dividend} \\ &= 0 \text{ otherwise} \end{aligned}$$

$$\begin{aligned} EQUITY_i &= 1 \text{ if firm } i \text{ issues equity within one year of recapitalization} \\ &= 0 \text{ otherwise} \end{aligned}$$

The results from Equation 4-7 are shown in Table 4-8.

TABLE 4-8
LOGIT ANALYSIS OF THE DECISION TO PAY
PREFERENTIAL DIVIDENDS

	Parameter Estimate (Chi-Square)
Intercept	0.406 (0.99)
EQUITY	-0.693 (1.05)
Number of Observations	42

I expect to find a positive relationship between the decision to follow through and pay preferential dividends and the decision to issue equity. In fact, the relationship is negative although not significant. While equity issues are related to the promise of preferential dividends, the same relationship does not exist with actual dividends. On closer examination, the insignificant impact of this variable may not be surprising. Firms that promise preferential dividends must then decide whether to pay preferential dividends. The decision is influenced by plans to issue equity and the relative cost of dividend signaling. Some firms decide to signal good quality with preferential dividends. Although the signal is costly, the benefit is that the firm is separated from the pool of uncertain quality firms. Other firms that also need to issue equity may find that dividend signaling is too costly so they choose not to pay preferential dividends. The promise of preferential dividends at the recapitalization gives firms the option to evaluate the costs and benefits of dividend signaling when the time comes to issue equity. Firms with very low cash flow and/or poor future prospects will find dividend signaling prohibitively costly and they may actually benefit from the pooling process.

Equity offers that are preceded by costly signals should exhibit less of a price decline at the announcement than equity offers that are not preceded by costly preferential dividends. As a future area of research, I intend to measure the abnormal returns of dual-class firms relating the announcement of the intent to issue additional low-vote equity. I intend to measure the reaction of both the high-vote and low-vote shares.

The data from this section appears to support a strong relationship between preferential dividend promises and equity issues. In Chapter 5, I investigate whether the expectation of future equity issues explains why the

stock prices of some firms react negatively to the announcement of a dual-class recapitalization.

The Behavior of Price Ratios Over Time

Agency costs between classes of common stockholders may change as the firm's capital structure changes and/or as insiders consolidate control as they reduce their investment. As a result, I construct a time-series of average cross-sectional price ratios measured from the date of recapitalization to investigate whether trends exist. I calculate price ratios for 55 firms from my sample from which I had access to prices during the first five years after the recapitalization transactions. I then calculate the cross-sectional average price ratios for each month following the issue of a second class of stock. Figure 4-1 shows that price ratios increase up to about 30 months from recapitalization and then decline to previous levels.

To better understand this time-series behavior, I present three additional time-series graphs based on differential firm characteristics. Figure 4-2 shows the time-series relationship between firms that issued equity within one year after the recapitalization and firms that did not issue equity in that time span. Consistent with the discussion in the previous section, firms that issue equity trade at lower price ratios than other firms. Firms that intend to issue new low-vote stock have the incentive to maintain the price of that class of stock. In Figure 4-3, I compare the time-series ratios of firms that were subject to takeover pressure during the first five years versus the time-series' ratios of other firms. The graph shows that takeover pressure seems to occur one to three years after the recapitalization. Closer examination of the data reveals that the spike exhibited during month 28 is explained by a price ratio of 3.0 exhibited by Care

Corporation during a control contest. The impact of Care Corporation is also noticeable in Figures 4-1 and 4-2 (firms that issued equity). In Figure 4-4, I present the time-series of firms that issued equity within one year and were not subject to takeover pressure. The graph shows that average price ratios started below 1.0 and gradually increase over time. This figure provides further evidence that the expectation of future equity offers provides motivation for paying dividends and maintaining the low-vote share price.

FIGURE 4-1
TIME SERIES OF CROSS-SECTIONAL PRICE RATIOS
BEGINNING AT RECAPITALIZATION (ALL 55 FIRMS)



FIGURE 4-2
TIME SERIES OF CROSS-SECTORAL PRICE RATIOS BEGINNING AT RECAPITALIZATION
(BASED ON THE DECISION TO ISSUE EQUITY)

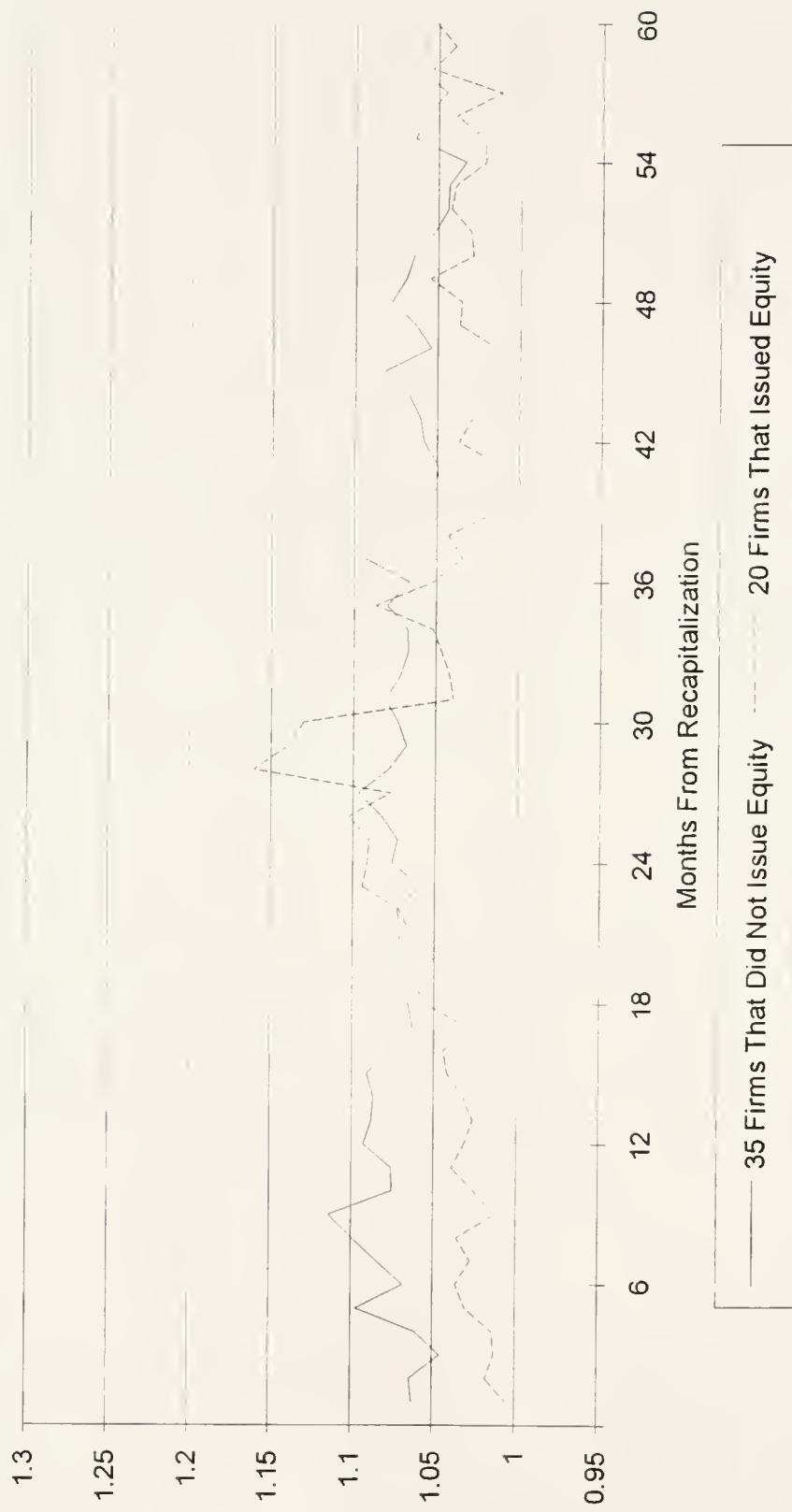


FIGURE 4-3
TIME SERIES OF CROSS-SECTIONAL PRICE RATIOS
BEGINNING AT RECAPITALIZATION
(BASED ON THE PRESENCE OF TAKEOVER PRESSURE)



FIGURE 4-4
TIME SERIES OF AVERAGE CROSS SECTIONAL PRICE RATIOS BEGINNING AT RECAPITALIZATION OF 12 FIRMS
THAT ISSUED EQUITY AND WERE NOT SUBJECT TO TAKEOVER PRESSURE



CHAPTER 5

VOTING PREMIUMS, EQUITY ISSUES, AND WEALTH EFFECTS

Background

In this chapter, I investigate the relationship between wealth effects measured on the announcement of the intent to recapitalize and four firm specific variables: (1) voting premiums measured after the recapitalization, (2) subsequent equity issues, (3) a measure of investment opportunities, and (4) preferential dividend promises to low-vote shareholders.

Previous studies have independently considered the impact of dual-class stock on firm value and the subsequent relative price differences between classes.³⁹ ⁴⁰ I test for a relationship between voting premiums measured during the first six months after recapitalization and wealth effects measured on the announcement of the recapitalization. Specifically, I investigate whether

³⁹ Jog and Riding (1986) find no significant response at the announcement date from 130 firms listed on the Toronto Stock Exchange. Partch (1987) examines the stock price reaction of 44 firms traded in the United States during the period 1962-1984. She finds statistically significant positive stock price responses at the announcement date and over intermediate negotiation dates. However, the median stock price response is negative and she concludes that shareholder wealth is not affected by limited voting stock. Jarrell and Poulsen (1988) look at 94 firms from the period 1976-1987. They find statistically significant negative returns.

⁴⁰ Lease, McConnell, and Mikkelson (1983) find an average voting premium for 4.06% for 30 firms traded in the United States. Levy (1982) finds that high-vote shares trade at a 45% average premium in a study of 25 Israeli firms. Megginson (1990) studies 152 dual-class British firms and finds that high-vote shares trade at a 13.3% premium over low-vote shares.

there is a relationship between the division of firm ownership between classes of stock and changes in the total market value of the firm.

Firms may recapitalize for a variety of reasons. For example, firms may use dual-class recapitalizations primarily as insulating devices that may cause a loss in firm value that is borne by low-vote shareholders. Jensen and Meckling (1976) suggest this possibility. They assume that a corporation exists with two groups of shareholders, management that controls the firm, and passive outsiders. Both groups are entitled to equal dividends. According to their model, management may not act in the best interest of outside shareholders. In fact, Jensen and Meckling show that managers may choose a set of activities for the firm such that the total value of the firm declines. As the manager's fraction of equity falls, his fractional claim on outcomes falls and this encourages him to divert larger portions of the firm's resources toward perquisites. Outsiders anticipate this action by insiders and drive down the stock price and firm value. The insiders maintain or increase their welfare by consuming non pecuniary benefits not received by outside shareholders.

Dual-class recapitalizations result in a situation similar to the scenario suggested by Jensen and Meckling. Insiders typically increase their voting control while decreasing their investment. DeAngelo and DeAngelo (1985) find that officers of firms with two classes of common stock averaged 54.8% of the voting power but only 27.6% of the claims to cash flows. Partch (1987) finds that insider ownership and voting power was 48.6% before a dual-class recapitalization. Twenty-one months after the event, inside ownership fell to 43.7% while insider voting power rose to 58.6%. As a result, dual-class recapitalizations may reduce total firm value as the agency costs associated with the separation of ownership and control are magnified. The reduction in firm value may ultimately be reflected in the low-vote shares that are primarily held

by outsiders. Although the firm may have a lower total value, insiders should not be harmed because, (1) they proposed the transaction, and (2) they can use their high-vote shares to improve and secure their employment positions and related salaries. If the transaction is viewed as an opportunity for insiders to consume significant firm value then outsiders will drive down the price before the recapitalization and the low-vote shares will reflect the drop in price when the stock classes trade separately.

Another group of firms may recapitalize because insiders with voting control are unwilling to raise new equity capital because of the possibility of losing voting control. Failing to access positive net present value projects hurts inside and outside shareholders equally. A dual-class recapitalization allows insiders to issue low-vote equity and access the growth. In these cases, there is an apparent lack of intent by insiders to consume firm value at the expense of outside shareholders so I expect to find firms with positive announcement effects exhibiting smaller subsequent price differences between stock classes.

In this chapter, I also investigate the relationship between subsequent equity issues and announcement effects. I identify two possible, but conflicting, relationships. First, a substantial proportion of firms issue equity subsequent to recapitalization. Thus, for firms with pre-existing dominate shareholders, the announcement of a recapitalization plan may primarily signal future equity issues.⁴¹ Similarly, the announcement of a recapitalization may signal that dominant shareholders want to reduce their dollar investment in the firm and that they intend to sell off blocks of their stock while maintaining control of the firm. If

⁴¹ Myers and Majluf (1984) show that stock prices will fall when management with superior information, acting in the interests of passive shareholders, decides to issue equity. Dann and Mikkelsen (1984) find a significant negative average price impact when equity issues are announced.

recapitalizations signal future equity offers then I expect to find firms that subsequently issued equity exhibit worse announcement reactions.

The second possible relationship was indirectly discussed earlier in this chapter. The primary motivation for some recapitalizing firms may be to raise capital to access positive net present value projects while protecting the voting control of insiders. For these firms, the recapitalization may prove to be equally beneficial to both classes of stock. One way to identify firms with this motivation is to investigate firms that subsequently issue low-vote equity. If accessing positive net present value projects is the primary motivation for recapitalizing, then I expect to find that firms that issued equity within the first year after the recapitalization enjoyed favorable announcement reactions. Alternatively, if the recapitalization is viewed as an announcement of an equity issue then the market may infer that the stock price is overvalued and negative reactions may be observed.

A second way to identify firms that recapitalize to access growth opportunities is to measure growth opportunities before the recapitalization. I use a calculation used by Smith and Watts (1992) shown in Equation 5-1.

$$\text{GROWTH} = (\text{Total Assets} + \text{Market Value of Equity} - \text{Book Equity}) / \text{Total Assets} \quad (5-1)$$

I measure the components of this calculation at the last annual financial statement date before the recapitalization. My data comes from the *Standard and Poor's COMPUSTAT* tape and from the *CRSP* tape. This equation measures the market's perception of the relative strength of the firm's investment opportunities versus the value of the assets in place. Because I am using accounting book values to measure the value of assets in place this variable is

measured with error. The growth variable should be greater than 1.0 if a firm's investment opportunities exceed the value of assets in place. For my sample of dual-class firms the average measure of growth opportunities is 1.50.⁴² This is consistent with the general perception of dual-class firms as smaller, growth oriented organizations. The value of GROWTH for each firm is displayed in Table 5-2. If the primary motivation for recapitalizing is to access growth opportunities then I should observe a positive relationship between GROWTH and the abnormal announcement reactions.

Finally, I investigate whether preferential dividend promises to low-vote shareholders lead to better market responses to the announcements of the recapitalizations. Jarrell and Poulsen (1988) test whether dividend compensation to low-vote shareholders leads to better market perception of the transaction. They are unable to find with statistical significance that firms that offer differential dividends outperform equal dividend firms at the announcement date.

An Event Study of the Issue

My null hypothesis is that price ratios, equity issues, growth opportunities, and dividend promises do not explain the difference in abnormal returns around announcement dates. I first test the null hypothesis by comparing the average abnormal returns of firms grouped by the form of dividend promise and by the decision to subsequently issue equity. I then use weighted least squares regressions to measure for significant explanatory power. My sample includes

⁴² Smith and Watts find an average ratio of 1.34 from their large sample of firms from all industry classifications.

44 recapitalization during the period 1980-1988. I limit my sample to relatively recent recapitalizations because of limited data from earlier recapitalizations and to capture the recent surge of transactions that feature preferential dividend offers and to coincide with the increased takeover pressure that seems related to the popularity of the issues. My sample includes firms from the samples of Partch (1987) and Jarrell and Poulsen (1988). I use the announcement dates identified in those studies when they are available. My sample also includes firms not measured by previous studies. I collected event dates for these firms by searching the *Wall Street Journal*, *Barrons*, and the *Dow Jones News Service*. I record the first report of the dual-class recapitalization proposal. My sample size is smaller than Jarrell and Poulsen's because I require that both classes of common stock trade publicly after the recapitalization. This permits me to study the relationship between announcement effects and voting premiums.

I estimate the two day abnormal returns around 44 announcements of the intent to recapitalize using the methodology in James (1987). This requires estimating by ordinary least squares the model in (5-2) using 80 daily returns prior to $t=-10$, where $t=0$ is the date of the announcement.

$$R_{it} = \alpha_i + \beta_i R_{mt}, \quad (5-2)$$

R_i is the daily return for firm_i, and R_{mt} is the daily return on a value-weighted market index comprised of the securities on the *Center for Research in Securities Prices* (CRSP) tape.

The event window is 10 days centered on $t=0$ for each prediction error (PE_{it}) and standardized prediction error (SPE_{it}). I define these errors in Equations 5-3 and 5-4.

$$PE_{it} = R_{it} - (\alpha_i + \beta_i R_{mt}), \quad (5-3)$$

$$SPE_{it} = \frac{PE_{it}}{1 + \frac{1}{T} + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{j=1}^T (R_{mj} - \bar{R}_m)^2}}, \quad (5-4)$$

T is the number of observations in the estimation period t= -80 to t= -10.

From SPE_{it} , I find a two day standardized prediction error, $STERRDAY$, shown in equation 5-5.

$$STERRDAY_i = (SPE_{i,-1} + SPE_{i,0}) / \sqrt{2}, \quad (5-5)$$

I use $STERRDAY_i$ to test hypotheses. I define a mean $STERRDAY$ in equation 5-6.

$$\text{Mean } STERRDAY = \frac{\sum_{n=1}^{\text{obs}} STERRDAY_n}{\sqrt{\text{obs}}}, \quad (5-6)$$

In Table 5-1, I report the average abnormal return and standardized prediction error (STERRDAY). Consistent with previous studies, my study of 44 firms that recapitalized during the period 1980-1988 exhibits similar, ambiguous announcement effects. Eighteen firms showed positive abnormal returns to the announcement to recapitalize while 26 firms responded negatively. The average two day response was -.73%. Although the mean and median returns are

negative, the responses are not statistically significant. The average voting premium measured over the six months after the recapitalization is 3.67%. Although this premium is lower than the average premium found in Chapter 3, it is consistent with the lower premiums found near the recapitalization date in Figures 4-1 through 4-4 in the previous chapter.

TABLE 5-1
AVERAGE ABNORMAL RETURNS BASED
ON RECAPITALIZATION ANNOUNCEMENTS

All Firms	
Total number of firms	44
Number of positive responses	18
Number of negative responses	26
Mean Abnormal Return T= -1 to 0 (t-Value)	-0.0073 (-0.96)
Standardized prediction error T= -1 to 0 (t-value)	.1726 (-0.86)
Mean Voting Premium (t-value on difference from 1.0)	1.0367 (3.36) **

** Significant at the 95% level

In Table 5-2, I report the mean prediction errors and STERRDAY for each recapitalization announcement. I also report the average price ratios measured during the period six months after recapitalization, a measure of the firms' growth opportunities, equity issues within one year after recapitalization, and the form of dividend promise. Five firms exhibited positive responses to the announcements at the 90% significance level or better. Five firms also reacted negatively at the 90% significance level or better. The average measure of GROWTH is 1.50. Sixteen firms issued equity in the first year after the recapitalization.

TABLE 5-2
THE STANDARDIZED ABNORMAL RETURNS ASSOCIATED
WITH EACH RECAPITALIZATION ANNOUNCEMENT

Firm Name	Event Date	PE2DAY1 ^a	STERRDAY ^b	RATIO ^c	GROWTH ^d	EQUITY ^e	DIV ^f
Alberto Culver	03-17-86	-0.0168	-0.4625	1.0610	1.31	1	At Least
American Fructose	09-28-84	-0.0370	-1.2436	0.9532	1.43	1	Equal
Autodynamics	04-15-81	0.0154	0.3941	1.0917	2.43	0	At Least
Baldwin & Lyons	04-11-86	-0.0299	-0.6214	1.1262	0.99	1	Equal
Base Ten Systems	10-28-80	0.0090	0.2150	1.0196	1.02	1	At Least
Bio Rad Labs	01-29-80	-0.0326	-0.8546	1.0496	1.79	0	At Least
Blount Inc	04-26-83	-0.0376	-0.9577	1.0009	1.78	0	Preferred
Canandaigua Wine	05-14-86	-0.0073	-0.1655	1.0319	1.22	1	Preferred
Care Corp.	07-08-83	0.0884	1.6560*	1.1352	2.08	0	Preferred
Charter Medical	08-28-81	-0.0184	-0.5637	1.0138	1.50	1	At Least
Crown Central Petr	05-22-79	-0.0364	-0.7380	1.1096	0.82	0	Equal
Dairy Mart	09-20-85	-0.0929	-1.7541*	0.9968	1.08	1	At Least
Diagnostic Retrieval	06-10-83	-0.0684	-1.9560*	1.1306	2.39	0	At Least
Equitable of Iowa	02-28-80	0.0042	0.3586	1.0128	0.96	0	Equal
Everest & Jennings	10-14-80	0.1044	2.7239**	0.9917	1.01	0	Preferred
Figgie International	04-26-83	-0.0806	-2.4751**	1.1151	0.72	1	Preferred
Food Lion	09-02-83	-0.0031	-0.0897	1.0487	2.00	1	Preferred
Forest City Enterpr.	07-26-83	0.0628	2.7638**	1.0084	1.32	0	Preferred
Hechinger	08-30-83	0.0005	0.0236	1.0096	3.24	0	Preferred
Homestead Fin	09-16-86	-0.0242	-0.6191	0.9713	1.00	1	Preferred
Int. Dairy Queen	01-28-86	0.0024	0.0547	0.9919	3.52	1	Preferred
Kelly Services	02-22-84	0.0036	0.2345	0.9747	2.71	0	Preferred
Key Co.	08-12-85	-0.0272	-0.7457	1.0393	0.91	0	At Least
Liberty Homes	04-24-85	0.0312	1.4961	0.9887	1.13	0	Preferred
Malrite Comm	05-02-85	0.0132	0.5360	1.0670	1.89	1	Equal
McRae Industries	06-30-83	-0.0025	-0.0549	1.1453	1.76	0	At Least
Methode Electric	08-25-82	-0.0071	-0.4335	1.0069	1.72	1	At Least
Mobile Comm.	01-31-83	0.0377	1.0487	1.0859	2.24	1	Preferred
Moog Inc	04-10-80	-0.0531	-1.6061	1.0051	1.06	1	At Least
Oriole Homes	01-14-83	-0.0660	-1.4847	1.0143	1.14	0	Preferred
Pasquale Food	06-30-83	-0.0027	-0.0345	1.0373	0.71	0	At Least
Presidio Oil	03-10-87	0.0242	0.4013	0.9904	0.90	0	Preferred
Restaurant Assoc.	08-07-85	-0.0583	-1.7551*	1.1624	0.92	0	Preferred
Saunders Sys	11-04-81	-0.0271	-1.4203	1.0246	0.98	0	At Least
Schwartz Brothers	06-20-88	-0.0651	-0.7478	0.9662	0.92	0	Preferred
Sequa Corp.	12-19-86	-0.0189	-0.7684	1.0307	1.15	0	Preferred
Smith A & O	08-25-83	-0.0862	-1.8997*	1.1218	0.65	0	At Least
Tele-Comm	06-19-79	0.0695	2.1307**	0.9688	1.52	0	Equal
Three D Depts.	11-22-83	-0.0248	-0.8059	1.0328	2.14	0	Preferred
Turner Broad	08-11-87	-0.0484	-1.6324	1.1544	1.34	0	Preferred
United Foods	05-10-83	-0.1679	-3.6589**	1.0165	1.28	0	Preferred
Visual Graphics	12-17-86	-0.0015	-0.0493	1.0990	1.14	0	Preferred
Watsco	04-03-84	0.0161	0.6349	1.0681	2.06	0	At Least
Wiley John & Sons	07-30-82	0.0002	0.0121	0.7447	2.01	1	At Least

- * Significant at the 90% level
- ** Significant at the 95% level
- a PE2DAY1 is the prediction error over the period $t=-1$ to $t=0$, where $t=0$ is the day of the recapitalization announcement.
- b STERRDAY is the standardized prediction error over the period $t=-1$ to $t=0$, where $t=0$ is the day of the recapitalization announcement.
- c RATIO is the ratio of the average high-vote stock price divided by the average low-vote stock price. The averages are calculated over the first six months following recapitalization.
- d GROWTH is an estimate of the investment opportunities of the firm.
- e EQUITY is a dummy variable that equals 1.0 if the firm issued equity within one year of recapitalization.
- f DIV is a dummy variable that equals 1.0 if the firm offers preferred or potentially preferred dividends to the low-vote shareholders.

In Table 5-3, I look at the differential wealth effects that arise because of the decision to issue equity within one year after the recapitalization. Firms that subsequently issue equity produce significant negative wealth reactions. The subsequently measured ratio between prices is not significantly different from 1.0. Firms that did not issue equity display an insignificant reaction to the announcement. The mean price ratio for these firms is higher and significantly different from 1.0.

TABLE 5-3
DIFFERENTIAL EFFECTS OF EQUITY ISSUES WITHIN ONE YEAR
OF RECAPITALIZATION ON ANNOUNCEMENT REACTIONS

	Firms That Did Issue Equity	Firms That Did Not Issue Equity	<i>t</i> statistic for the difference between means
Total number of firms	16	28	
Number of positive responses	5	12	
Number of negative responses	11	16	
Mean Abnormal Return $T = -1$ to 0 (<i>t</i> -Value)	-0.0192 (-2.47)**	0.0005 (-0.05)	1.42
Standardized prediction error $T = -1$ to 0 (<i>t</i> -value)	-0.5105 (-2.04)**	0.0204 (0.11)	1.47
Mean Voting Premium (<i>t</i> -value on difference from 1.0)	1.0149 (0.75)	1.0491 (4.02)**	1.39

** Significant at the 95% level

In Table 5-4, I separate wealth effects based on the form of dividend promise to the low-vote shareholders. Because my sample was limited to firms that recapitalized in the 1980s the category of equal dividends includes only six firms. Interestingly, firms that offer low-vote shareholders at least the same dividend as paid to the high-vote shareholders display significant negative reactions to the announcement. Although the possible preferential dividends implied by the "at least" promise seems to be a better offer than equal dividends, the market reaction is negative. One possible explanation is that this form of dividend promise is the most ambiguous and outside shareholders may infer that management's motives are less than sincere sinister based on the unusual dividend offer. The mean voting premiums across all three categories are similar and differ in significance based on their sample sizes.

TABLE 5-4
DIFFERENTIAL EFFECTS OF DIVIDEND PROMISES
ON ANNOUNCEMENT REACTIONS

	Equal	"At Least"	Preferred
Total number of firms	6	16	22
Number of positive responses	3	4	10
Number of negative responses	3	12	12
Mean Abnormal Return T= -1 to 0 (t-Value)	-0.0027 (-0.16)	-0.0246 (-2.87)**	0.0040 (0.06)
Standardized prediction error T= -1 to 0 (t-value)	0.0704 (0.17)	-0.6581 (-2.63)**	0.1141 (0.53)
Mean Voting Premium (t-value on difference from 1.0)	1.0396 (1.34)	1.0348 (1.54)	1.0373 (2.88)**

** Significant at the 95% level

As a final set of tests, I use weighted least squares to regress PE2DAY1 on post-recapitalization voting premiums, a dummy variable indicating subsequent equity issues, a measure of investment opportunities, and a dummy variable indicating whether a preferential dividend was promised to low-vote shareholders. Different forms of the model are shown in Equations 5-7 through

5-9. The regression results are displayed in Table 5-5. I reject the null hypothesis that price ratios and subsequent equity issues are not related to abnormal returns around announcement dates. Price ratios measured after the recapitalization are negatively related to announcement reactions. Firms that issue equity also suffer worse market reactions to the announcement. The variable representing the growth opportunities of the firm is not significant. I find some evidence of a relationship between dividend promises and abnormal announcement returns when I group firms by the form of dividend promise. I am unable to reject the null hypothesis that dividend promises do not explain announcement effects when I use regression analysis.

$$PE2DAY1_i^a = \alpha_0 + \alpha_1 RATIO_i^b + \alpha_2 EQUITY_i^c + \varepsilon_i, \quad (5-7)$$

$$PE2DAY1_i^a = \alpha_0 + \alpha_1 RATIO_i^b + \alpha_2 EQUITY_i^c + \alpha_3 GROWTH_i^d + \varepsilon_i, \quad (5-8)$$

$$PE2DAY1_i^a = \alpha_0 + \alpha_1 RATIO_i^b + \alpha_2 EQUITY_i^c + \alpha_3 GROWTH_i^d + \alpha_4 DIV_i^e + \varepsilon_i, \quad (5-9)$$

The empirical results from this chapter support Jensen and Meckling's theory that the distribution of firm ownership and control reduces the market value of the firm. The market reacts negatively to recapitalization announcements in firms where the high-vote stock ultimately trades at a higher premium. The announcement effect reflects the value of transferred voting power. This value from voting power is reflected by higher price ratios between the high-vote and low-vote stock. The vote is valuable for the variety of reasons previously discussed.

TABLE 5-5
WEIGHTED LEAST-SQUARES REGRESSION OF PE2DAY1
ON PRICE RATIOS, EQUITY ISSUES, GROWTH, AND THE FORM
OF DIVIDEND PROMISE

Variable	Parameter Estimates From Equation 5-8 (t-value)	Parameter Estimates From Equation 5-9 (t-value)	Parameter Estimates From Equation 5-10 (t-value)
INTERCEPT	0.148 (1.91)*	0.132 (1.59)	0.133 (1.59)
RATIO	-0.142 (-1.90)*	-0.133 (-1.73)*	-0.129 (-1.67)
EQUITY	-0.021 (-1.74)*	-0.021 (-1.72)*	-0.021 (-1.66)
GROWTH		0.005 (0.57)	0.007 (0.81)
DIV			-0.012 (-0.84)
R-Square	0.114	0.121	0.136
F Value	2.63	1.83	1.54
P Value	0.0843	0.157	0.210

* Significant at the 90% level

- a PE2DAY1 is the prediction error over the period $t=-1$ to $t=0$, weighted by the standard deviation of the residuals_{i,t} for the estimation period, $t=-11$ to $t=-91$.
- b RATIO is the ratio of the average high-vote stock price divided by the average low-vote stock price weighted by the standard deviation of the residuals_{i,t} for the estimation period, $t=-11$ to $t=-91$. The average price ratios are calculated over the first six months following recapitalization.
- c EQUITY is a dummy variable that equals 1.0 if the firm issued equity within one year after the recapitalization weighted by the standard deviation of the residuals_{i,t} for the estimation period, $t=-11$ to $t=-91$.
- d GROWTH is a measure of the investment opportunities facing the firm weighted by the standard deviation of the residuals_{i,t} for the estimation period, $t=-11$ to $t=-91$.
- e DIV is a dummy variable that equals 1.0 if the firm offers preferred or potentially preferred dividends to the low-vote shareholders weighted by the standard deviation of the residuals_{i,t} for the estimation period, $t=-11$ to $t=-91$.

The results of this chapter also indicate that negative announcement effects may result because the recapitalization is interpreted as a signal of the intent to issue equity. Management of firms that intend to issue low-vote equity

soon after the recapitalization may be signaling that their stock is overvalued. Myers and Majluf (1984) show that stock prices will fall when management with superior information, acting in the interests of passive shareholders, decides to issue equity. Dann and Mikkelsen (1984) find a significant negative average price impact when equity issues are announced.

Most of the proxy statements proposing the recapitalizations mention issues of low-vote equity as a possible benefit of the transaction. One question that arises is how the market can apparently distinguish at the recapitalization announcement, the firms that will subsequently issue equity. I searched the recapitalization announcements for simultaneous announcements of equity issues. Only two firms made simultaneous announcements. The abnormal returns in both cases were significant but one was negative while the other was positive. This result indicates that the market relies on information other than public announcements to distinguish firms that will issue equity.

An interesting relationship exists between the two primary results from this chapter. First, high price ratios after recapitalization are related to negative announcement effects. Second, firms that issue equity are associated with negative announcement effects. However, Table 5-3 reveals the price ratios of firms that issued equity are insignificantly different from 1.0 while the price ratios of firms that did not issue equity are significantly different from 1.0. That is, we know that high price ratios tend to be associated with negative announcement effects. We also know that firms that issue equity are also associated with negative announcement effects. But firms that issue equity exhibit relatively low price ratios. This suggests that the two effects are independent. Firms that intend to issue equity have the incentive to support the stock price of the low-vote shares. They do this by offering preferential dividends to signal firm value and to build a reputation that they do not intend to treat low-vote shareholders

unfairly. This strategy results in price ratios nearer 1.0 for firms that subsequently issue equity.

CHAPTER 6 SUMMARY OF CONCLUSIONS

In Chapter 3, I divide dual-class firms into three categories based on the form of dividend promise to the low-vote shares. I calculate the ratio of the high-vote stock price divided by the low-vote stock price to measure the value of the vote and the differential dividend promises. Within each category, I calculate a time-series of cross-sectional average price ratios. I find firms that promise preferential dividends to low-vote shareholders feature the lowest average price ratios while firms that offer equal dividends to both classes trade at the highest average ratios. Firms that promise low-vote shareholders optional preferential dividends display average price ratios between the average ratios of the other categories. Means tests and ordinary least squares regressions confirm that the differences in average price ratios are significant. These results confirm that outside shareholders believe, and therefore price, the dividend promises despite evidence that insiders may have the ability and incentive to negate the promises by not paying dividends.

In Chapter 4, I use pooled, cross-sectional data to study the impact of firm specific variables on voting premiums. I find that preferential dividend payments further reduce price ratios. Almost all the firms that promise preferential dividends to low-vote shareholders pay dividends. Many firms that promise at least an equal dividend pay preferential dividends. I also find that the presence of a control threat significantly increases the voting premium as high-vote shareholders anticipate a greater chance of receiving a preferential takeover bid. The voting premiums from my sample are significantly higher than those

reported in by Lease, McConnell, and Mikkelsen (1983) in their study of pre-1979 data.⁴³ This parallels the popularity of hostile takeovers during my sample period. I conclude that the possibility of a takeover premium may induce outside shareholders to pay a premium for high-vote shares even when they have no interest in actual control of the firm.

Also in Chapter 4, I provide evidence that the intent to subsequently issue low-vote equity may explain why preferential dividends are promised by insiders and priced by outside shareholders. I use a LOGIT model to show that preferential dividend promises are closely associated with subsequent equity issues.

In Chapter 5, I use an event study to measure the wealth effects relating to the announcements of the intent to recapitalize. I report a negative but insignificant average reaction. I use weighted least squares regressions to test whether the cross-sectional wealth effects measured at announcement are related to the decision to issue equity within one year of the recapitalization. I find that firms that subsequently issue equity exhibit worse price responses to the recapitalization announcements. This implies that negative reactions to the announcement of the intent to recapitalize may not reflect the market's disapproval of the recapitalization, but instead, the market's view that the announcement is a signal that the firm intends to issue equity.⁴⁴

⁴³ Lease et al. report an average price ratio of 4.06% for their sample of firms that offer equal dividends to both classes. The subset of firms from my sample that offer equal dividends to both classes trade at an average price ratio of 11.3%. All of the firms in my sample trade at an average monthly ratio of 6.9%.

⁴⁴ The negative market reaction to equity issues is documented by Myers and Majluf (1984) and Masulis and Korwar (1986).

I also investigate whether the cross-sectional announcement effects are related to the size of the price ratios measured soon after the issuance of a second class of common stock. Price ratios provide a summary measure of the value of the vote. My premise is that the motivation for dual-class recapitalizations may vary greatly between firms. The ambiguous average wealth effects discovered in previous studies support this assertion.⁴⁵ At some firms, insiders with voting control may be unwilling to raise new equity capital because of the possibility of losing voting control. Dual-class recapitalizations may allow these firms to access the growth and increase firm value. Other firms may use dual-class recapitalizations primarily as insulating devices that may cause a loss in firm value that is borne by low-vote shareholders. Using weighted least squares regressions, I find a significant negative relationship between announcement effects and subsequently observed price ratios. This is evidence that firm value is a function of the separation ownership and voting between classes of common stock.

My study makes a number of contributions to the understanding of dual-class stock and recapitalizations. Most recent recapitalizations feature preferential dividend promises to low-vote shareholders. These dividend promises are believed and priced by outside shareholders. In fact, many dual-class firms pay preferential dividends when they could legally be avoided. I argue that insiders pay the dividends and outsiders price the promises because

⁴⁵ Jog and Riding (1986) find no significant response at the announcement date from firms listed on the Toronto Stock Exchange. Partch (1987) concludes that shareholder wealth is not affected by limited voting stock. Gordon (1986) and Cornett and Vetsuydens (1989) also fail to find a significant stock price effect of a change to two classes of common stock. Jarrell and Poulsen (1988) find statistically significant negative stock price reactions to announcements of the intent to recapitalize into two classes of common stock.

insiders want to reduce their investment in the firm and intend to issue additional low-vote equity soon after the recapitalization. Cash dividends are one way for investors to reduce their investment in the firm without reducing their voting control. In addition, paying preferential cash dividends to the low-vote shares enhances the firm's reputation and is a costly, but effective, signal of strong growth opportunities. Outsiders consider preferential dividend signals persuasive because they can not be mimicked without costs and because the cost is higher to insiders who are most likely to know the firm's true value. Outsiders are more likely to price the preferential dividend promises when they perceive a high probability of future equity offers. This behavior supports the low-vote share price and enhances the cash inflow when new low-vote stock is issued.

Although the existence of voting premiums has been previously documented by Lease et al., the source of the cash flows creating the value of the vote has been debated. Although insiders can extract firm value in the form of perquisites, outsiders who are often the marginal shareholders that determine market prices, have no direct way to extract value. I argue and provide evidence that outsiders may be willing to pay a premium for high-vote stock as an option to participate in possible preferential takeover bids in the future.

Finally, I find that preferential dividend promises are closely linked to subsequent equity issues. The abnormal returns measured on the announcement of the intent to recapitalize are significantly lower for firms that issue equity within one year after the recapitalization. This may imply that studies that find average negative reactions to the intent to recapitalize are measuring the market's reaction to an expected equity offer. I also find that abnormal announcement returns are negatively related to the price ratios measured soon after the recapitalization. Price ratios measure the value of the

vote. Thus, the announcement reaction to a recapitalization is a function of the value of the vote lost by outsiders. These results confirm Jensen and Meckling's assertion that firm value will fall as ownership is separated from control.

APPENDIX
INFORMATION ABOUT 11 FIRMS THAT DISAPPEARED FROM
TRADING DURING MY SAMPLE PERIOD 1984-1988

Autodynamics

Last trading date 6/18/84. In financial difficulty, each share of A and B stock was reclassified into one share of one general stock class. The firm was soon delisted by NASDAQ for failure to meet capital requirements. Later the firm was acquired by Assix International.

Beneficial Standard

Last trading date 5/8/85. The firm was liquidated with equal dividends paid to both classes of stock.

Care Corp.

Last trading date 10/2/86. The firm was acquired by Owens-Illinois at a price of \$24.75 per share to all shares. This offer was negotiated by the family members who controlled the bulk of Care Corp.

Care Enterprises

Last trading date 3/22/88. The firm was very near an agreement for an acquisition by Southmark Corp. Southmark planned to selectively offer premiums to company insiders with large high-vote holdings. In addition, a former director and major shareholder agreed to exchange the right to vote his 10% of the low-vote shares and 22% of the high-vote shares for a loan of \$7,335,200. The shares would serve as loan collateral. Ultimately, the acquisition was abandoned and Care Enterprises declared Chapter 11. Before news of the acquisition, the firm's stock traded at an average ratio of 1.1. During the negotiations with Southmark the ratio climbed to a high of 3.0.

Charter Med. Corp.

Last trading date 8/31/88. The chairman and other insiders took the firm private. The chairman and his family owned 92% of high-vote stock and 29% of the low-vote stock before the offer. An equal price was offered to both classes but nearly 100% of the high-vote stock was already held by the management coalition. The price ratio remained constant at near 1.0 during the transaction.

Multnomah Kennel

Last trading date 9/21/87. One class quit trading publicly.

Nielsen A.C.

Last trading date 8/29/84. Acquired by Dun & Bradstreet. An equal price offered to each class.

Pasquale Food

Last trading date 1/5/87. The firm was acquired by John Labatt LTD. An equal price per share was paid to both classes. On the announcement that an equal price would be paid to both classes, the high-vote stock fell \$1.25 to the same price as the low-vote stock.

Resorts International

Last trading date 1/11/88. Prior to April 1986, the firm's stock traded at an average ratio of 1.05. In April of 1986, the chairman and founder died unexpectedly leaving 340,000 high-vote shares representing 48% of voting control. The estate later rejected a takeover offer of \$135 per share for only the high-vote stock. The stock ratio increased to 2.06 by May 1986. Minority high-vote shareholders worried that they would not receive a premium bid. The low-vote stock went up to \$77 and then fell to \$45 after the takeover bid was announced for only the high-vote shares. In March of 1987, Marvin Davis bid \$140/share for the high-vote shares and \$15/share for the low-vote shares. The

price ratio reached a high of 7.68. Donald Trump ultimately purchased the high-vote stock for \$135/share. He then bid \$15/share for the low-vote stock. Trump was unsuccessful in buying the low-vote shares and taking the company private. Merv Griffith then offered \$35/share for both classes. The low-vote shareholders claimed that Trump had a fiduciary duty to them and should accept the offer even though he paid \$135 for his shares. Ultimately, Griffith buys Trump's shares privately and buys the low-vote stock for \$36/share.

Restaurant Associates

Last trading date 11/20/87. The company was purchased by management. An equal price was paid to both classes.

Saunders System

Last trading date 8/11/86. Acquired by Ryder Systems Inc. An equal price was paid to both classes.

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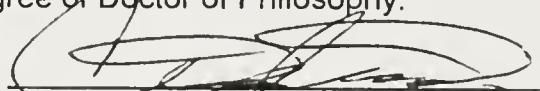
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BIOGRAPHICAL SKETCH

Steven Cox was born in Seattle, Washington, on August 24, 1959. He holds a Bachelor of Business Administration in economics (1982) from the University of Iowa, Iowa City, Iowa, and a Master of Business Administration (1984) from the University of Northern Iowa, Cedar Falls, Iowa. He was employed as an accountant at Ernst and Whinney in Des Moines, Iowa, in 1984 and with R.W. Cox and Company in Charles City, Iowa, in 1985 and 1986. During that time Mr. Cox also served as an instructor of management at the University of Northern Iowa. He is a Certified Public Accountant and a Certified Management Accountant. Mr. Cox completed the Ph.D. program at the University of Florida in 1993 and holds a faculty position at Indiana University Kokomo.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



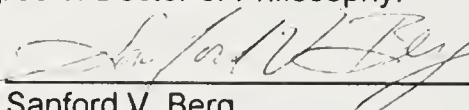
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This dissertation was submitted to the Department of Finance, Insurance, and Real Estate in the College of Business Administration and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August 1993

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